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ABSTRACT

Conditions that inhibit change in higher education institutions and various models of the change process are described. Attention is also directed to: organizational character, structural features, planning procedures, key individuals in the change process, and practical advice about change. The major change models for higher education institutions are: research, development, and diffusion (rational planning); problem solving; social interaction; political (conflict); linkage; and adaptive development. Structural features of the institution that may affect receptivity to change include school size and decentralized/centralized decision-making procedures. Characteristics that indicate openness to change include lateral rather than vertical communications, a consensus on operating goals, a spirit of self-examination, provision of resources for change, and widespread influence on decision-making. Ongoing planning processes that rely on institutional research data to plan long-range goals and to revise the plans periodically may allow the institution to respond to the need for change. Use of an internal versus an external change agent are compared. Steps in instituting change may involve trying to create a receptive climate, diagnosing the problem that led to a need for change, developing a proposal for implementing the change, campaigning to gain approval, and implementation. (SW)

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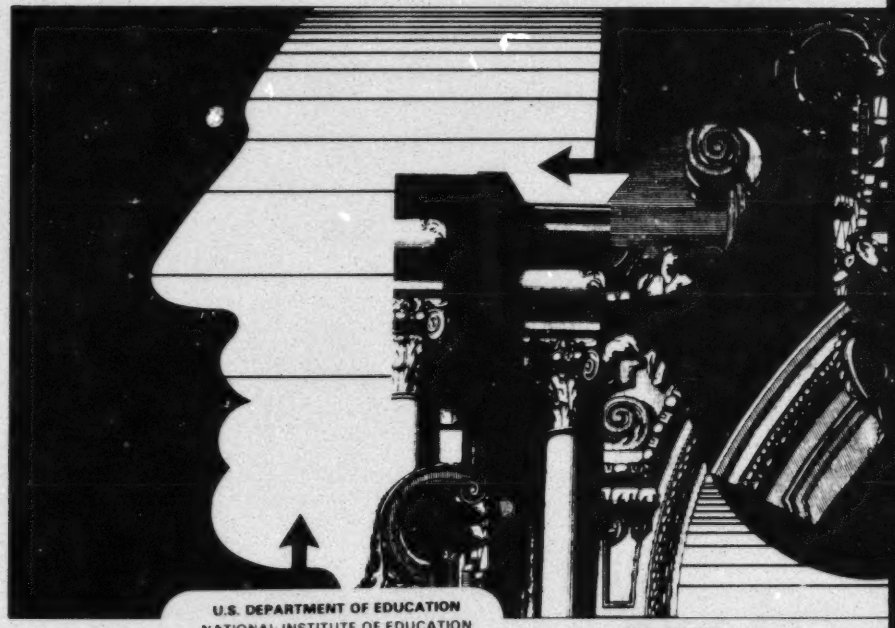
Report *1982*

The Process of Change in Higher Education Institutions

Robert C. Nordvall



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The Process of Change In Higher Education Institutions

Robert C. Nordvall

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Foreword

The idea of change—to make something different—is usually greeted with mixed enthusiasm. Forced change caused by uncontrollable events is usually greeted by a whole spectrum of negative emotions from uncertainty and anxiety to fear and outright hostility when the ultimate directions and magnitude are unknown. Planned change determined through consensus is usually greeted more positively. Feelings of enthusiasm, hope, and cooperation are created by the knowledge that there is some element of self-determination and personal involvement in the impending change.

Ironically, higher education as a social system, because of its very missions, must respond to the pressures for change while at the same time resisting change. Higher education has been described as the curator, critic, and creator of our culture. As curator, higher education's responsibility is to preserve our culture. As critic, it should identify that which needs changing in our culture; as creator, it must take an active role in instituting change. Higher education has also been described as a mirror of our society. As such it must automatically reflect and accommodate the changes of society as a whole.

The forces of change usually occur externally. This is true for higher education as well as other organizations. These external forces vary widely in their intensity and direction. Many are predictable but more often than not, they catch the academy by surprise. Enrollments, available revenue, expectations of students, parents and employers, changing government regulations, and court decisions are all examples of forces that institutions have little or no control over, but that greatly influence the makeup and direction of an institution.

If external forces dictate the need for change, then it can be said that it is the internal forces that dictate its magnitude and direction. How faculty, administrators, and students perceive the necessity for change and then exhibit a willingness to work for it, will ultimately dictate the final outcome of the change process. To paraphrase Henry Wilkenson Bragdon in *Woodrow Wilson: The Academic Years*, it is an academic truism that to change higher education is harder than trying to move a graveyard. Yet as President Millard Upton of Beloit once observed, "When a college is on the verge of oblivion, there is no problem in its achieving instant curriculum revision." However, there must be a middle ground between absolute permanence and instant change.

This Research Report by Robert C. Nordvall, associate dean of Gettysburg College, is aimed at making the change process comprehensible. Examined in this report are the conditions than inhibit change and various models of the change process. It details specific ways that a planned, controlled change process can be developed and used as a constructive force to achieve the goals of an institution.

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Overview

Since historically there have always been calls for change of this country's higher education system, it is natural that current arguments for change are met with skepticism. Still, the last 20 years have seen remarkable changes in those aspects of the environment that most affect colleges and universities. Students went from passivity to political activism to a far less active stance. The number of students rose dramatically and now is predicted to soon decline. The ability of students as measured by national tests rose, declined, and stabilized. Public funds for higher education increased markedly, but recently financial problems have plagued both private and public institutions. College teaching became a relatively better paid profession, but then its financial status and security declined. These turnarounds within two decades provide strong evidence that change is needed.

Even if the need for change is conceded, the impediments are great. Both individuals and organizations resist change; many believe that the organizations and personnel at colleges and universities, especially faculty, are particularly resistant to change. But change *does* take place sometimes in these institutions. How does this happen?

Sometimes it happens in an unplanned fashion, usually as a response to external pressure. This report, however, reviews the research on *planned change* in colleges and universities in order to serve as a guide for persons working to change their own institutions.

The writings about change in institutions of higher education contain both theoretical models of the change process and practical advice about how to orchestrate that process successfully. The various models are based on differing conceptions of how the decision-making process works on a college or university campus. These conceptions of the process include collegial, bureaucratic, political, and atomistic (semiautonomous units).

The major change models for higher education institutions are research, development, and diffusion (rational planning); problem solving; social interaction; political (conflict); linkage, and adaptive development.

The research, development, and diffusion (rational planning) model assumes that a good idea presented with rational, convincing arguments can win acceptance. The important point is to develop an excellent idea, test it, and then present it. The model is criticized because it does not face the nonrational elements that are unavoidable in dealing with people and organizations.

The problem-solving model, in contrast, emphasizes these nonrational elements. It concentrates upon human relations as the source of problems in organizations. The goal is to build trust, improve communications, and generally improve individual and peer group relations. Outside consultants often are used to diagnose organizational problems. Training programs for employees often are provided. The major criticism of this approach is that it is unclear whether changing the attitudes and interpersonal relations of individuals actually improves the performance of the organization.

The social interaction model is derived primarily from studies of the

diffusion of technological innovations among groups such as farmers and doctors. Under this model, efforts are aimed at convincing opinion leaders within the organization to try a new idea. The assumption is that the idea will spread from opinion leaders and innovators to other, less adventuresome people in the organization. This model is criticized because innovations in higher education are often not technological, and the institutions in which these ideas must be implemented are not analogous to groups of farmers and doctors.

The political model emphasizes the process by which interest groups within the university influence the authorities to adopt changes. Activities include building coalitions, getting the ear of important people, applying pressure, etc. A problem with this model is that change that emerges from a conflict atmosphere in a college or university is vulnerable; the losers generally have enough independence to frustrate the goals of the winners.

The linkage and adaptive development models are syntheses of the other models. The linkage and adaptive development approaches stress the need for advocates of change to be in touch with sources and users of innovation both within and outside of the institution. The tactics used to bring about change may call upon the rational planning, problem-solving, social interaction, and political aspects of change. These two models are more comprehensive, but they lack focus. They can be viewed as compilations of practical advice drawn from a variety of theoretical perspectives.

The most important factor that influences the success of a change effort is the organization's receptivity to change. Studies have been done to ascertain which features of an organization indicate such readiness. The findings are mixed as to whether large or small institutions are more receptive to change, whether decentralized or centralized decision-making procedures are more conducive to change, and whether unstable or stable organizations are more ready to accept change.

There is more agreement, however, about other characteristics that mark an organization as open to change. These include an open, less stratified structure; lateral rather than vertical communications; a consensus on operating goals; a spirit of self-examination; provision of resources for change; and widespread influence on decision making.

Many writers propose the institution of ongoing planning processes, allowing the organization to respond to the need for change. These processes provide procedures to plan comprehensively for continued change. People within the college or university are assigned the tasks of collecting institutional research data and using these data to assist top officials in formulating long-range plans, which are subject to periodic revision. Planning is not solely the duty of high administrators; groups within the organization also are involved in the determination of planning goals.

Much of the writing about theories of change is based upon the authors' experiences with actual change projects. These writers not only present theories; they also provide practical advice that applies to their theories. The advice from experts on change sometimes is inconsistent, just as the theories are.

The practical advice is addressed to a person or a group wishing to make a change—sometimes called a change agent. The term "change agent" is more likely to be used if the person or group is brought into the organization from the outside to assist in the change process. There are advantages and disadvantages to the use of an internal versus an external change agent. One study has found, however, that internal groups are more successful in this role.

If a group leads the change effort, it must both work on the task to be accomplished and maintain effective internal group processes so that its work will be effective.

Since a climate of receptiveness to change is very important to the success of a plan to make a change, fostering this climate, if it is not present, is the first task of change advocates. Next, there should be a diagnosis of the problem that led to a desire for change. Information should be secured concerning the theories of how change comes about.

Next, a change proposal is put together. The proposal should be formulated by knowledgeable people, who should encourage wide participation in the shaping of the plan. The proposal should show that the new idea does the job better, is consistent with the structure and norms of the institution, is easily understood, can be instituted on a trial basis, can be adopted in part, and will have results that are easily assessed. A proposal should address both the needs of the organization and the personal interests of its members. The rewards for individuals should be explicit.

In mounting a campaign to gain approval of the proposal, the forces that facilitate or hinder approval should be identified and their strength and importance measured. It is better to try to reduce resistance to change in various areas than to have the forces favorable to the plan exert stronger pressure for its adoption. Skillful people will be needed to lead the change effort. They will need to obtain the support of key administrators and faculty, groups on campus, and, if appropriate, external groups.

Colleges and universities tend to favor written communications. These are important, but face-to-face discussions are essential in building support for a change proposal.

If the proposal wins initial approval, the problems of implementation must be addressed next. In education, innovations often are implemented incompletely. The change proposal itself should include a clear plan for the steps of the implementation process and the assignment of responsibility to carry out these steps.

Impact of Societal Trends on Higher Education

Works about the process of change in colleges and universities often begin by cataloging trends that exert pressures upon these institutions to change. The trends cited include both large-scale changes with broad effects throughout society and developments whose impact is particularly direct upon higher education.

Sometimes the literature on change simply refers to the accelerating pace of change in today's world without listing specific alterations (Hefferlin 1969). Major elements of change in society, when listed, include technology; pollution; the energy crisis; changing lifestyles and values; the population explosion throughout most of the world, with the attendant scarcity and rising cost of resources; and the population shifts in the United States between rural and urban areas, the north and the sunbelt states, and the young and the old (Christenson 1982, p. 6).

Another major element is the current economic stagnation. Especially when coupled with the declining number of young persons, these economic conditions have a strong effect upon higher education. Students become more concerned with careers and the economic value of a college education (Sikes, Schlesinger, and Seashore 1974; Glover 1980). With the increased competition for limited tax funds, pressures grow upon public colleges to control costs, private institutions are less likely to receive public subsidies, and stricter limitations are proposed on the availability of publicly funded financial aid for students. Colleges for whom tuition is a major source of revenue thus face both a declining pool of traditional college-age students and a diminished capacity of these students to pay for the rising tuition charges. Faculty morale sags in the wake of decreasing purchasing power of salaries and possible loss of positions through retrenchment (Glover 1980).

Calls for higher education to respond to a changing environment do not necessarily result from negative environmental pressures. In the 1960s and through the early 1970s the economic status of higher education institutions was generally improving. There was a period of widespread student unrest, but the quality of the academic preparation of students was rising. Curriculum reform was viewed primarily in terms of creating more flexible options so that students could become more independent learners (see Ladd 1970; Levine and Weingart 1973; Lindquist 1978).

A prime impediment to change in this period was the high demand for higher education. In a seller's market, colleges and universities felt less pressure to change (Hefferlin 1969). Surprisingly, however, the shift from a seller's market to a buyer's market does not necessarily promote new initiatives. Tighter budgets mean less slack funds to add new programs. While a decreasing pool of potential applicants might favor innovative programs as a means to attract students, the result could also be that stringent finances will lead to the elimination of innovative ventures as dispensable frills (Sikes, Schlesinger, and Seashore 1974). As their economic prospects dim, faculty may become discouraged and defensive, absorbed with their own survival and unwilling to make changes even

though such changes might be in their best interests (Adelson 1974; Gaff 1978).

Responses to the Need for Change

Resistance to change in individuals. Although persons in universities often attribute change to relatively local and personal events (Hefferlin 1969), reform in higher education institutions usually comes from the impact of external forces (Hefferlin 1969; Lindquist 1978).

In their failure to institute changes prior to such impact, and in their slowness in responding to external pressures, colleges and universities reflect the phenomenon of resistance to change by individuals and organizations. Discussions of the change process in higher education allude to both a broad concept of such resistance and to the applications of this concept within postsecondary education.

In an often-cited article on resistance to change in individuals, Watson (1972) lists sources that contribute to stability in personality: homeostasis (reverting to complacency as a basic psychological characteristic), habit (responding in the accustomed way), primacy (persevering in a response that was initially successful), selective perception and retention, dependence (incorporating attitudes and values of those upon whom we were originally dependent), superego (serving tradition as an agent in the personality structure), self-distrust, and insecurity and regression (pp. 611–14).

Lippitt, Watson, and Westley have a shorter, less technical list that covers some of the same ground. It includes: reluctance to admit weakness, fear of failure, fatalistic expectation of failure caused by previous unsuccessful change attempts, and fear of losing a current benefit (1958, pp. 180–81). In looking at reasons for resistance to change, Levine concentrates on aspects of the proposal. Resistance is likely if the change is a threat to basic security, not understood, or imposed upon those affected (1980).

Resistance to change among faculty members can be seen as an example of professionals' general conservatism, which favors known methods (Evans 1967). Additionally, unlike most other professionals, faculty as students have all extensively observed role models of the profession. In their graduate training, college teachers rarely receive training in teaching methods that might modify the effect of the role models (Gaff 1978). Graduate training instills a loyalty to the discipline that inhibits receptivity to nontraditional approaches. Furthermore, teaching is viewed as a highly independent, personal endeavor; this may make teachers reluctant to adopt the ideas of others (Hefferlin 1969; Stiles and Robinson 1973). Adoption of ideas used elsewhere can be seen as an admission that teaching is a standardized task that can be made more efficient through the use of exemplary procedures. For some academics, this makes teaching too much like an industrial process; they are skeptical about the idea that it should be a goal to make the university efficient (Hefferlin 1969). Finally, the willingness to change may be inhibited by a rampant pessimism among

faculty today in the light of the uncertain prospects for higher education (Gaff 1978).

An unfavorable attitude of resistance among faculty often is assumed, but this assumption has been challenged. One study indicates that the amount of resistance to change among the persons in an organization should not be treated as a constant; it should be measured for the specific organization as part of the process of attempting to institute changes (Gross, Giacquinta, and Bernstein 1971). For example, one writer reports that a person involved in a change project at a university found that, with slight encouragement, the faculty were willing to work to improve their performance. This willingness was traced to their high level of education, idealism, sense of vocational stability, professional interests, and exposure to the optimism of their students (Bruenig 1980, pp. 97–98).

That resistance to change necessarily is detrimental is also challenged. Sometimes change is not helpful for the whole organization. The defender of the status quo may be the one to point this out. He or she may also illustrate how a plan is more beneficial to some people than others. Resistance to change can serve the objective of maintaining the competence, self-esteem, and autonomy of persons in the organization. Those proposing change should try to discover the values of the organization represented in the stance of change opponents and then tailor the change proposal, if possible, to preserve these values (Klein 1976).

Resistance to change in organizations. Just as individuals have personality features that make alterations difficult, organizations do also. These include:

- Inertia—reliance on patterns of known behavior
- Conformity to organizational norms
- Desire to maintain coherence—avoidance of changes in one area that necessitate unwanted changes elsewhere in the system
- Vested interests—resistance to ideas that threaten the prestige or economic livelihood of individuals
- The sacrosanct—development beyond organizational norms of taboos and rituals that cannot be violated
- Rejection of outsiders—avoidance of change that comes from external pressures or ideas
- Recruitment of similar members—attraction by organizations of persons who agree with the organization's activities
- Clinging to existing satisfactions—finding these satisfactions especially comfortable when compared with the fear of the unknown. (Chickering et al. 1977, pp. 114–15; Lippitt, Watson, and Westley 1958, p. 84; Hefferlin 1969, pp. 10–13; Watson 1972, pp. 614–17)

Certain features and values of higher education institutions exacerbate the general tendency of organizations to repulse new ideas. The educational system is vertically fragmented; therefore, reform at only one level

is difficult (Hefferlin 1969). Even looking only at the postsecondary level, many public institutions are under a state higher education governance system that was set up to ensure control, not foster innovation (Palola and Padgett, 1971).

One surveyor of the change process quotes a statement he attributes to Freud: "Trying to change a university is like rearranging a cemetery" (Hall 1979a, p. 25). Colleges and universities are deliberately structured to prevent precipitous change. The power to implement academic decisions is pluralistic. Administrators, a key segment of the decision makers, have an ambiguous role: They are often hired because of their competence as academicians to do many tasks that are not academic in nature (Hefferlin 1969; Lindquist 1974; Sikes, Schlesinger, and Seashore 1974).

While not established to slow down change, another feature of institutional structure—fragmentation—nevertheless has this effect. First, in the college or university community there is the division of students, faculty, and administration. These groups are in turn divided into smaller groups: departments, living units, administrative offices, etc. Faculty also are divided by discipline and major field; these divisions often are accentuated by the location of campus buildings and facilities. The result is a strenthening of the identification and isolation of subgroups (Lindquist 1974).

The values of a higher education institution also work against those seeking modifications. Since the results of education are difficult to measure objectively, it is hard to demonstrate the value of change (Sikes, Schlesinger, and Seashore 1974). The traditional academic reward system emphasizes teaching and research, not innovative activities (Ladd 1970; Levine and Weingart 1973; Lindquist 1978). Innovations are not welcomed that challenge traditional values, such as meritocracy, graduate-research specialization (at elite, research-oriented universities), and the assumption that there are certain necessary experiences for becoming an educated person (Lindquist 1974). Not surprisingly, given these values, the reputations of institutions are not based upon their record of innovation (Hefferlin 1969).

Since the structure and values of colleges and universities are not favorable toward reform, these institutions must make special efforts to become open to new approaches. Such efforts are not common. Institutions do not give attention to training their personnel to gain the skills needed to foster change (Lindquist 1978; Sikes, Schlesinger, and Seashore 1974). Change-oriented people are often marginal members of the campus community who are not in central positions (Bruenig 1980; Ostergren 1979). When innovators marshall an effort to modify policies, they often must depend upon like-minded persons who volunteer to help. It is difficult to maintain an intense volunteer effort in the face of the academic calendar, with its peaks and lulls and the hiatus each year of the summer break (Sikes, Schlesinger, and Seashore 1974). The budget system also militates against broad initiatives; it is on a yearly basis, which at best facilitates incremental developments (Chickering et al. 1977).

Thus, the phenomenon of resistance to change is entrenched in colleges and universities. Much of the writing about change describes successful and unsuccessful attempts to overcome this resistance. The writing about change usually assumes that change in general or a specific change is beneficial. Change is not, however, always wise or desirable. Persons working to institute change should consider the wisdom of the proposed change as more important than the process of achieving change.

Models of the Change Process

The findings about instituting change in higher education can be separated into two approaches. The first, termed descriptive, describes the structure of the university and presents models of how change actually takes place. The second approach, termed practical advice, advises how persons should act in order to promote success in a change effort; while based upon conceptions of "what is," this approach concentrates on "how to."

Models of Decision Making

Models for the change process derive from the following concepts of decision making in colleges and universities:

- Collegial. A community of scholars makes shared collegial decisions. A college is a community of professionals in which expertise determines who makes the decisions (Baldridge 1971; Levine 1980; Lindquist 1978). A subdivision of the collegial model is the epistemological model, in which the community is split into various academic cultures based upon the diverse intellectual approaches of the disciplines (Hartman 1977).
- Bureaucratic. Decisions are made in a rational, formalistic way by the appropriate persons within a defined hierarchical structure. A college is like a commercial enterprise or government agency in which formal authority confers decision-making power (Hartman 1977).
- Political. Decisions are made through negotiation and compromise among power blocs who have the power to restrict formal authority. A college is like a democratic state in which those affected by policies have at least some control over them (Hartman 1977; Lindquist 1978). A systems view of a university as made up of independent subunits with divergent goals leads to a political decision process (Hartman 1977).
- Atomistic. The units are semiautonomous and make their own decisions without resorting to institution-wide norms (Levine 1980).

Lindquist proposes as an ideal a fifth decision-making model: open collaboration. Organization members affected by decisions are involved in their formulation in order to increase commitment and responsibility. Leaders and staff engage in open, two-way communication. Problems are worked out not only in terms of evidence and rational discussion but also with the open confrontation of emotional concerns. The competition and conflict of the political model are replaced by cooperation (1978, p. 21).

Levine finds evidence to support the collegial, bureaucratic, political, and atomistic views in the operation of higher education institutions. He suggests that these approaches can be related specifically to different activities of the university. The collegial manner of decision making tends to be used in activities associated with the teaching function. The service function (both in terms of internal support services and services provided to the community) gives rise to a bureaucratic organization. Research is conducted in atomistic units, which decide their own activities with little

direction or guidance from the officers of the university. The political mode of deciding issues is common for activities associated with multiple functions because these activities reflect the competing and often irreconcilable demands of teaching, research, and service (1980).

Comprehensiveness of the Models

Models of the change process draw from both research about change in general and research about the diffusion of innovations. Although "change" and "innovation" are often used interchangeably, not all change involves innovation. A return to an idea formerly used at an institution is change without innovation. The trend toward more structured general education programs in undergraduate curricula often illustrates noninnovative change.

Change, as discussed in this chapter, is planned change. One model of change, the complex organizational perspective, views change as unplanned responses (usually minor adjustments) to pressures and demands from the environment (Conrad 1978). Obviously, this is not a model of planned change.

There is clearly no comprehensive, verified theory of how change takes place in higher education. The models draw upon diverse writings concerning higher education and other settings: accounts of the adoption of innovations; research on university governance; guides about how to implement change; theories of how innovations are diffused, especially agricultural and medical innovations; reviews of planned change in elementary schools, secondary schools, communities, and business organizations; and works on power and decision making in political communities (Lindquist 1974). These writings tend to be descriptive rather than analytical. The approach taken in individual books and articles often reflects the author's disciplinary training. Sometimes the writer is a person with a vested interest in the change plan described; his or her perspective thus may be biased. Often a particular model of change is assumed in the work, and it describes the extent to which the process conformed to this model. The studies do not apply empirical methods using common dependent variables and demonstrating the direction and intensity of the relationship between variables (Dill and Friedman 1979; Gross, Giacquinta, and Bernstein 1971; Parker 1980). After investigating the literature, one writer concluded that "appropriate models for planned change in higher education are incompletely conceptualized for empirical validation of their utility in practice" (Glover 1980, p. 8).

Findings that are not empirically validated nevertheless can be useful. In fact, one author doubts, given the way organizations and social systems function, whether a comprehensive, empirically validated model can be constructed for the design and implementation of reform (Cerych 1979, p. 20).

Description of the Models

The major models of change include research, development, and diffusion (rational planning); problem solving (with action research and organi-

zational development as variations); social interaction; political (conflict); linkage; and adaptive development (with systems theory and contingency theory as related models).

Paul (1977) outlines a comprehensive review of four of these models: problem solving, social interaction; research, development, and diffusion; and linkage. He compares the processes, the most influential factors for success, the expected effects, and the underlying strategies among these four models. In distinguishing the models according to their underlying strategies, Paul uses the three types of strategies proposed by Chin and Benne (1972). These include an empirical-rational strategy, which emphasizes that reasonable arguments will persuade rational persons; a normative-reeducative strategy, which concentrates on changing attitudes and values in order to alter sociocultural norms; and a power-coercive strategy, which attempts to gain compliance through the use of legitimate or illegitimate power.

While drawing upon the analysis of Paul and others, the following summaries of the models examine each model in terms of its basic emphasis, intellectual orientation, conception of the activities of the change process, conception of the key individuals in the process, and criticisms of the model.

Research, development, and diffusion (rational planning). *Emphasis:* This approach assumes that change comes about when rational people are convinced by the arguments presented to them to implement the change. The empnasis is on developing a good idea and presenting it in a convincing way. The model does not seek to change the people or the structure of the organization.

Intellectual orientation: The model is based upon the basic assumptions of scientific research: there is a rational sequence for applying and evaluating an innovation; development of an innovation requires long-term planning and division and coordination of labor among the developers; the long-term development process, with its high costs, is justified by the quality of the innovation; and the innovation will be presented to a passive, rational consumer (Havelock 1973, p. 161).

Activities: The process starts with basic and applied research—hypothesis building, designing of alternatives, testing alternatives, etc. The result is a new technique, design, or product. The innovation must then be disseminated. An empirical-rational strategy usually is used to convince people to try the new idea. (When legislation or regulation compels usage, the strategy is power-coercive.) Examples of new techniques developed and disseminated through this strategy include the Keller plan of personalized instruction, the PLATO system of computer-assisted instruction, management by objectives (MBO), and planning, programming, budgeting systems (PPBS) (Havelock 1973; Paul 1977).

Key individuals: A researcher develops the idea, which is disseminated through writings, conferences, films, etc. On-campus individuals or committees formulate proposals for change that often draw upon ideas de-

veloped elsewhere, and they present the ideas through rational arguments. Proposals are formulated in this way because rationality is a basic assumption in the work of institutions of higher education (Lindquist 1978).

Criticisms of the model: This model ignores nonrational motivations that influence change. A proposal that diminishes the security or status of a unit is almost certain to be opposed regardless of the power of the arguments in its favor (Lindquist 1978). Ideas for change are unlikely to have uniform impact throughout the institution. A college or university has various subsystems; what is good or rational for one subsystem may not be for another. Although this model may be applicable to the diffusion of technological innovations, problems in education are more often organizational than technological. It is difficult in education to use a scientific approach to distill objectives from goals and then establish means to meet the objectives (Baldridge and Deal 1975a; Ostergren 1979).

Problem solving. *Emphasis:* The problem-solving model is primarily concerned with how people feel the need for change and then become willing to change (Lindquist 1978). Emotions must be dealt with as well as rationality. People are more likely to change when they feel that, in meeting the organization's goals, they will also satisfy their personal needs. Roadblocks to change often involve communication between people in the organization. The goal is to replace competition and a closed attitude with openness and collaboration. If this is done, the people in the organization can work together productively to solve its problems (Baldridge 1972; Lindquist 1978). The model concentrates primarily upon changing the attitudes and values of individuals, not the structure of organizations, although structural change may ultimately result.

Intellectual orientation: This approach can be traced to the tenets of humanistic psychology. As a method of organizational change, it is applied behavioral psychology. The problem-solving model draws upon the human relations school of business administration, which began with Elton Mayo in the 1930s and has modern proponents such as Warren Bennis, Chris Argyris, and Rensis Likert (Lindquist 1978).

Activities: This model starts with the diagnosis of problems and the search for alternative solutions. This is similar to the opening steps of the research, development, and diffusion model, but the emphasis is different. Solutions require improved communication, building trust, and improved individual and peer group relations (Baldridge 1972; Lindquist 1978; Paul 1977). The goal is not only to solve current problems but to build the capacity for solving future problems (Paul 1977).

Strategies used include consulting with work groups, often with on-site research and feedback of information to raise awareness of what the problems are. Employees then undergo training for improving interpersonal skills—for example, sensitivity training, T groups, role playing, group observation and process analysis, and brainstorming (Baldridge 1972; Havelock 1973). At least initially, training sessions often take place at a neutral site away from the workplace (Parker 1980). Training and con-

sulting are designed to enable the employees to understand the problem and generate their own solutions using their new skills. The assumption is that successful solutions require a feeling of ownership by those who must implement them (Lindquist 1974). The strategy used in this model is primarily normative-reeducative.

Key individuals: The object is to improve internal resources, but this usually requires the help of a consultant from the outside. As resource linker, the consultant raises awareness of resources within the organization and external to it that can help solve the problems diagnosed. As process helper, he or she aids the group in fashioning the problem-solving process. As catalyst, the outside facilitator helps to bring about the change as efficiently as possible (Ingram 1978; Lindquist 1978).

Action research and organization development. Action research is the name given to a problem-solving model with a special emphasis on the systematic collection of data in order to diagnose the cause of dissatisfaction (Sikes, Schlesinger, and Seashore 1974). Those who must implement the solution are involved in planning the research to gather diagnostic data. The term "action research" is used to distinguish this type of research from the usual social science research, in which an investigator defines the problem without involving the organization studied and without expecting that the results will lead to change in the organization (Hook 1980). After data feedback, action training takes place to provide the skills for taking the necessary steps in problem solving (as identified by the research). Such training tends to be in small groups and to use an outside consultant.

Action research is often associated with organizational development (OD). The human relations school of business administration led to programs to change employee attitudes, values, and interpersonal skills. However, such skills proved difficult to exercise in an organizational setting hostile to them. So the organizational development idea arose; its goal is not to change personality but to change the functioning of work groups within the organization. Work groups are trained in communication and problem-solving skills. This training moves from a neutral site, where theoretical problems are considered, to the work setting, where the real issues are confronted. Organizational development puts a strong emphasis on establishing an open climate of problem solving so that the institution can deal successfully with the challenge of constant change. Although concerned with changing people, this approach is likely to lead also to changes in the organizational structure (Parker 1980; Sherwood 1976; Van Meter 1979–80).

Criticisms of the model: First, the model is based on the premise that changing individuals can change organizations. A number of assumptions are made: that an individual's attitudes can be changed, that changed attitudes will alter motivations, that the new motivations will be used in the work situation, and that coworkers can also be persuaded to change their behaviors. This is a long list of assumptions (Baldridge 1972). Second,

with its stress on improved communication, the problem-solving strategy implies that conflict is the result of misunderstandings, but there may be genuine conflict even when the communication is clear. Third, this is a high-cost strategy—both because it attempts the difficult task of changing individual attitudes and values and because it is an indirect rather than direct way to change the organization. Fourth, it has been difficult to prove that improved employee morale results in higher productivity in the business setting. It might also be hard to establish in higher education. Finally, this approach concentrates almost exclusively upon internal factors. Yet change often occurs through the impact of external events upon the institution (Baldridge 1972, p. 7).

Social interaction. *Emphasis:* This model concentrates upon the process by which the idea of change is communicated to and accepted by potential users (Lindquist 1978). This emphasis is analogous to that of the research, development, and diffusion model, but the social interaction view concentrates more upon how the innovation spreads (the diffusion stage). It doesn't seek to change people or the structure of organizations. It examines how diffusion takes place among individuals and, to a lesser extent, within organizations.

Intellectual orientation: This model is based upon empirical research on the diffusion of agricultural innovations and medical advances (Paul 1977). It deals with innovation as a type of change rather than change in a broader sense.

Activities: The process does not start with a diagnosis of user needs. Users can be persuaded to adopt an innovation even if they haven't realized their need for it (Paul 1977). This happens when information is conveyed to them about the relative advantage, simplicity, low risk, compatibility with individual or organizational values, and other desirable features (Lindquist 1978).

Information is conveyed broadly to potential users, but a special effort is made to convince opinion leaders. Within any group there are subgroups with varying proclivities to adopt a new idea. One categorization of these subgroups includes innovators, early adopters, early majority, late majority, and laggards (Evans 1967, p. 20). The research attempts to identify the characteristics of people in these categories, especially those most favorable to new ideas (innovators and early adopters), so that the message about the innovation can be targeted at these groups. Once the adoption process begins, it follows a predictable pattern; further intense efforts from the outside to facilitate adoption are not needed (Havelock and Havelock 1973). This pattern is so predictable that mathematical models of the adoption cycle can be constructed (Lawton and Lawton 1979).

An empirical-rational strategy is employed in providing information. In persuading people to adopt the innovation, normative-reeducative tactics may also be used (Paul 1977).

Key individuals: An outsider starts the process by presenting information about the innovation. Unlike action research, this model does not

envision participation of the users in the research to diagnose problems and generate solutions. After the outsider has presented the message, key individuals are the opinion leaders, who can convince others because of their status, and the innovators and early adopters, who can convince others by demonstrating that the innovation works.

Since this model derives from research on agricultural and medical innovations, the individuals who adopt often are seen as members of a group with common interests (e.g., farmers or physicians) but not necessarily as members of an organization.

Criticisms of the model: In focusing on individuals' adoption of technical innovations, the model reveals an individualistic bias that ignores organizational aspects of change (Baldridge and Deal 1975a). Educational systems are not comparable to farms. Educational innovations are often not technical ones that can be easily evaluated. The model stresses the adoption phase, but in education a major problem is the implementation of innovations after they are adopted in principle (Paul 1977).

In looking at the characteristics of people who are more or less inclined to adopt change, the model stresses nonmanipulable factors. Once we know the characteristics of laggards, how can we change these (Baldridge and Deal 1975a)? Furthermore, it is open to question whether certain characteristics predict receptivity to innovation. In a study of schools in the San Francisco Bay area, characteristics of persons nominated as opinion leaders—leaders in change efforts, participants in change efforts, and a random sample of all teachers in the schools—were analyzed. The study did not find that the opinion leaders and change participants had a particular set of characteristics, as would be predicted by literature on diffusion of innovations (Baldridge 1975a).

Political (conflict). *Emphasis:* Like the problem-solving model, the political model emphasizes how people feel the need for change and then become willing to change, but the assumptions are different (Lindquist 1978). In the political model, interest groups feel and articulate the need to change. These groups are quite willing to implement the change, but they have to influence persons within the organization who have the authority to institute the change. The ultimate goal often is the rearrangement of power within the organization, a structural change rather than a modification of the attitudes and values of persons within the organization.

Intellectual orientation: This method is based upon theories that explain conflict among groups in society and the mediation of this conflict through political processes. Thus, it calls upon studies of the exercise of power in political communities. The assumption is that groups within the organization will attempt to influence those with authority, and authorities will respond to these attempts. A further assumption is that, within organizations, conflict and division into many power blocs and interest groups is natural (Baldridge 1972).

Activities: The process starts with a person or group who wants a change

made. There is no phase to diagnose problems and generate solutions. Somebody or some people know what they want; the problem is how to get it. Those seeking change need to build coalitions among influential persons or groups (Lindquist 1978). The importance of opinion leaders is stressed here, as in the social interaction model. The objective is to influence both key individuals in the organizational hierarchy and small groups of political elites who have disproportionate influence in the decision process (Baldridge 1972). Writers emphasizing the political dimensions of change are interested in tactics that will be politically effective. Licklider (1981) provides an illustrative list of such tactics—for example, involving others on a team to push for change, building informal alliances with others on campus, presenting the idea so it meets the personal interests of those you wish to influence, avoiding unnecessary conflict, and maintaining momentum of supporters throughout the process.

The political approach may use empirical-rational, normative-reeducative, and power-coercive strategies, but it is more rooted in the idea of power-coercive strategies than are the other models. Power is used to convince the authorities to institute a change. Once the change is made, its implementation throughout the organization depends upon the power of officials to demand compliance.

Key individuals: In a political battle, advocates are necessary to champion the cause. The ideal attributes of advocates are commitment, determination, and ability to influence those in power. The notion of a gatekeeper is important. The gatekeeper can put a demand on the agenda of a person or group with power to do something about it (Lindquist 1978).

In the political model, authorities are viewed as people to be influenced. Conrad, however, found that administrators in higher education serve additional roles. His grounded theory of academic change is based upon analysis of curricular change at four institutions. He found that, of the models he considered, the political model—with some modifications—best explained the process of change. Administrators were not found to be a passive group, reacting to pressure. They were a vested interest group who intervened in the process as facilitators or resisters and who influenced the policy recommendations growing out of the process (1978, pp. 111–12).

Criticisms of the model: Gaff (1978) points out that some desirable changes, such as teaching improvement, will not take place through a political process because there is no organized constituency in favor of such changes. Furthermore, a major problem in education, where faculty have great independence, is implementing change. Even if authorities order a change, how do you get faculty to comply? Resistance to compliance is likely to be great in such a situation, and there may also be attempts to overturn the decision. Those who lost the first battle may start the second one. A continuing cycle of conflict is likely (Lindquist 1978).

Linkage. *Emphasis:* The linkage model developed by Havelock (1973) is a synthesis of the other models. It has a dual focus: the internal problem-

solving process of the user and the linkage of this process to resources external to the system. Persons interested in change on campus need to be linked to sources external to the campus through which innovations are diffused. Such persons should also be linked to diffusion channels within the institution so they can facilitate the internal use of innovative ideas. For change to occur, both the structure of the organization and the people within it may have to be altered.

Intellectual orientation: Since this model is a synthesis of other models, it shares their orientations. Rational planning is employed in developing new ideas (research, development, and diffusion). Ideas are exchanged through social networks (social interaction). Human barriers to change are to be confronted and overcome (problem solving). Power and authority are confronted when necessary (political) (Lindquist 1978). The political aspect of the synthesis is stressed in Lindquist's (1974) political linkage model. He emphasizes how to attain not only individual but also institutional adoption. The plan for change must flow through the institution's authority system.

Activities: Reciprocal communication networks need to be established between innovation sources and users. People interested in change need to be linked to each other within the institution and to sources of innovation outside the institution and developers of innovations should be aware of the needs of users (Paul 1977). Although the linkage to external sources is crucial, the goal is to develop internal problem-solving capacity so that users formulate the problems, understand the ideas for change, and communicate innovations through internal channels (Parker 1980). A person with knowledge of external change ideas will play different roles in getting these adopted according to the stage of the adoption process (Hall 1979b). At first he or she will provide information, and then encouragement. If the innovation is tried out, the facilitator may demonstrate how to use it and help with implementation. Later the role might shift to urging users to train others in the implementation of the idea.

Since it is a synthesis of other models, this model employs all three strategies for change: empirical-rational, normative-reeducative, and power-coercive, but the first two of these are more central.

Key individuals: A linking agent or agency is envisioned that senses needs, helps establish communication channels, and brings information about external innovations to users (Paul 1977). Certain types of persons on campus are more likely to serve as linking agents. Cosmopolitans are persons who are abreast of the latest happenings elsewhere, both through readings and personal contacts. Cosmopolitans knowledgeable about developments in teaching-learning research can best provide the link to new information on academic improvement. New members of the institution also are good candidates to be linking agents; they arrive with recent knowledge of what is happening at their former institution. A third source for linking agents is persons engaged in research or experimentation in education. They have their own ideas and are likely to keep up with the literature in educational research (Lindquist 1974).

Criticisms of the model: Since it synthesizes other models, this model avoids the criticism of the other models that it presents too limited a perspective. But criticisms of the other models that are not based upon their limited perspective also apply to the linkage model.

The model is abstract. It is often accompanied by an illustration with a diagram representing the internal problem cycle of the user, another diagram showing the steps in the resource system's attempt to provide solutions, and arrows back and forth between these two diagrams to indicate the linking process between the user and the external resource system (Havelock 1973, p. 166; Lindquist 1978, p. 10). Such an illustration does not make clear which current practices should be changed in order to implement this model. How this grand scheme can be adapted to the setting of a higher education institution is also not clear (Lindquist 1978).

Adaptive development. *Emphasis:* This is Lindquist's synthesis of the other change models, set out in *Strategies for Change* (1978). As a synthesis, it is similar to the linkage model. It suggests that there is no single method for instituting change. Lindquist uses the phrase "adaptive development" because he found that "planned change is a local development, but one which is stimulated and guided by the adaptation of external innovations rather than the invention of new ones" (1978, p. 223). The model modifies the linkage synthesis by putting greater emphasis upon the reshaping at the local level of ideas imported from external sources. As with the linkage model, in adaptive development use of the procedures may lead to changes in both the structure of the organization and the people within it.

Intellectual orientation: Lindquist says of adaptive development that "in many ways, it is the organizational analog of Piaget's theory of human development" (1978, p. 223). He does not elaborate on this analogy. As a synthesis, it draws upon the heritage of the models it combines. Rather than discussing the premises from other models that he is synthesizing, Lindquist describes the steps in his model of change. Gaff's organic model for improving teaching practices shares most of the features of the adaptive development model (Gaff 1978).

Activities: The first step is to find out what is available elsewhere to help with a problem that is felt internally. Ideas from external sources are presented as the raw material for the local development of solutions. The ideas should come from a creditable source. For example, curriculum ideas from prestigious institutions can become a major source for changes in the academic program of a university (Conrad 1978, pp. 104–105). The ideas should be compatible with local values. Evidence should indicate clearly the relative advantage of these ideas. They should be simple to understand and adapt. After they are adapted, the ideas can be tried out in a pilot project or in stages (Lindquist 1978). Implementation is a two-way process in which the innovation is modified to suit local needs, but the institution also changes to accommodate to the innovation (Farrar, DeSanctis, and Cohen 1980).

The emphasis on local adaptation raises the question of whether the

institution is "reinventing the wheel." Wheels can be copied and installed in the same manner in different situations; institutional change, however, involves interpersonal and organizational dynamics that differ from institution to institution (Ohme 1977).

The model is based upon five factors that Lindquist believes are critical in the attempt to introduce change in a university: "(1) interpersonal and informational *Linkage;* (2) active *Openness;* (3) initiating, guiding, involving and influencing *Leadership;* (4) *Ownership;* and (5) material and psychic *Rewards*" (1978, p. 240). All the work of the persons and groups working for change may well fail if there is not sufficient attention to this fifth factor—a system of rewards at the college or university that supports the implementation of change.

As a synthesis, this model too draws upon all three strategies for change, but there is more emphasis on the empirical-rational and normative-reeducative strategies than on the political-coercive.

Key individuals: Although the adaptive development model does allow for the help of external change agents, the key persons in the process are internal. The best persons to link the campus effectively to outside ideas are cosmopolitan locals—individuals who are knowledgeable about developments elsewhere but also are well connected to local leaders. Gatekeepers, who can provide innovators access to persons in authority, are important. Executive leaders and key faculty should be knowledgeable about trends in society so they can facilitate change (Lindquist 1978). An effective committee to bring about change must have direct exposure to external practitioners.

Criticisms of the model: Adaptive development is a practical model. Although it calls for adapting external ideas to fit the local environment, it contains practical suggestions for working within the environment. The question that arises is whether it is a model for change or merely a compilation of useful ideas about how to make change.

Systems theory and contingency theory. Two other perspectives on change emphasize analyzing local conditions carefully, not only to determine the substance of effective change but also to choose the best process for change. Systems theory views the change process holistically. Interactions among the social system, the environment of the social system, and the innovation itself are analyzed to design a process of change to fit the particular situation. Prescriptions for instituting change cannot be imported from external sources (Parker 1980). Ostergren elaborates on the interactions that are analyzed. As a social system, a college or university has five characteristics: "its membership, its ideology, its technology, its organizational structure, and its relations to the environment" (1979, p. 18). These five characteristics form, in effect, subsystems of the institution. Because these subsystems have conflicting values and interests, rationalistic and diffusion models of change are inapplicable to higher education.

Glover's contingency theory also begins with the premise that no one model of planned change applies to all institutions of higher education

(1980). Higher education institutions can be placed in various organizational sets, and these sets form a basis for predicting innovation frequency for different institutions. The seven variables used to divide higher education institutions into organizational sets are:

> *1. The characteristics of the organization; 2. the influence the organization has on its task environment; 3. forces in the macro environment that are largely beyond the control of the organization; 4. the characteristics of the innovation; 5. the characteristics of leaders; 6. the characteristics of members; and 7. the characteristics of change agents (1980, pp. 153–54).*

Criticisms of the model: Systems theory and contingency theory do allow for the variety of factors operating within institutions of higher education. They do not, however, provide much guidance to persons or groups wishing to implement change within an institution. These two theories require the analysis of so many factors that they are more theoretical than practical.

Organizational Structure, Character, and Planning

In the last chapter, models of both the decision-making process and the change process were presented as attempts to explain what actually takes place in a higher education institution. Another theme in the literature about change in higher education has dimensions of description versus practical advice: the readiness of an organization to undergo change and how it can best respond to this readiness. One part of this literature examines actual cases to describe the features of an organization that make it ripe to undergo change. A second part discusses the character of an organization engaged in self-renewal activities; this part tends to consider both what the characteristics are and what they should be. The third part, which is more in the nature of advice, sets out the types of planning that should take place in an institution responding to the challenges posed by a changing environment.

Structural Features

What are the signs that an organization is ready to undergo change, that it is open to innovation? Are there characteristics of institutions from which one can infer this readiness?

Institutional size. A characteristic that has been considered extensively in the research is institutional size. The results are inconclusive. Ladd (1970) argues that a secure, homogeneous institution (which is likely to be small) has the self-confidence to change readily; to change a large organization, forceful leadership may be required. Where Ladd found that large organizations had undergone major changes, he attributes this to strong pressure from students.

Hefferlin (1969) found a greater amount of change in graduation requirements at small, religious colleges, and he suggested that such institutions may have greater flexibility. In two additional studies, less selective liberal arts colleges and religious liberal arts colleges were found to be more likely to institute academic changes than were larger institutions (Glover 1980).

On the other hand, many studies point in the opposite direction on the issue of size and innovativeness. These studies have found that academic change is more likely at universities, leading research universities, and public comprehensive universities. The one study finding change most likely at public comprehensive universities did not completely correlate size and propensity to change; this study also indicated that the second most likely group to change was religious liberal arts colleges (Glover 1980). In a study of elementary and secondary schools, Baldridge discovered that increased size and complexity were positively related to rate of innovation (1975a, p. 163).

Contrary to common belief, larger institutions may be less bureaucratic than smaller ones. At larger institutions, decision making is more likely to be decentralized. Furthermore, at such institutions faculty have greater professional autonomy. Finally, the greater diversity of the tasks undertaken at a large university does not require the integration and interde-

pendence of academic departments needed at an institution that only teaches undergraduates (Glover 1980).

Blau found that new academic departments were established more frequently at large institutions. Ross refined Blau's findings by undertaking a study relating the size of the institution, among other factors, to the emergence of new departments in two different types of areas. Ross found that new departments of "main-line disciplines" (e.g., biophysics, linguistics, statistics) were instituted almost automatically at large, growing institutions that did not depend heavily on student fees as a revenue source. If the institution could generate resources (either internal or external) for the new field, it was instituted (1976, p. 150). For urban and ethnic studies, in contrast, establishment of new departments was based on the concurrence of a number of factors, only one of which was size.

Thus, although size is discussed extensively as an important structural feature in the research, there is no consensus about its effect. One researcher has concluded that small change is more common in large organizations while large change occurs more frequently in small institutions.*

Decentralization of decision making. Greater decentralization of decision making at large institutions has been cited as evidence that they are bureaucratic (Glover 1980). Further, innovation may be more prevalent where there is decentralized decision making, contrary to the assumption that strong presidential leadership is necessary to make major modifications such as the abolition of academic departments (Blau 1973). Decentralization may promote structural flexibility, which facilitates institutional innovation (Blau 1973).

Those who argue that faculty are more conservative than administrators claim that decentralization inhibits the strong role that administrators must play to transform institutions. To find out if innovation might be related to both decentralization and strong leadership, Ross tested the proposition that there is more academic innovation where there are both decentralized authority and a president who spends much of his or her time on academic affairs (1976, p. 147).

For the emergence of urban and ethnic studies departments, Ross found that the best predictors among institutional characteristics were large size, decentralized authority, administrative involvement, high selectivity in the admission of students, a high percentage of nonwhite students, and a high percentage of institutional revenue derived from tuition. Thus, decentralization did not necessarily negate administrative leadership as an important factor in change (1976, pp. 150–151).

Decentralization may not be a variable with a single simple effect. One view is that a high degree of complexity in an organization promotes the initiation of change but that the implementation of change is better accomplished in a less complex, more ordered environment (Dill and Friedman 1979; Lindquist 1978).

*Arthur Levine 1982; personal communication.

Instability. Hefferlin tested the idea that measures of organizational instability would predict the amount of academic reform. He found less of a relationship than he expected, but all the significant relations were "in the direction of a positive relation between change and instability" (1969, p. 135). Thus, some type of instability—arguments over goals, conflicts about financial support—may be necessary to provide a stimulus for change at most colleges and universities (pp. 163–64). In listing the characteristics of business organizations that seek planned change, Bennis includes "some exigency, dissatisfaction, tension, dilemma, or crisis" (1965, p. 170). Others, in contrast, view a period of institutional stability as one of the conditions favorable to sustaining a program of planned change at a college or university. (Peterson 1982; Sikes, Schlesinger, and Seashore 1974).

Instability can be viewed as the absence of stable traditions rather than as a crisis. Hefferlin found that the most dynamic institutions had changing and expanding faculty, more influential junior faculty, and the lowest proportion of tenured faculty (1969, p. 163).

The disparate findings on the effects of institutional size, decentralized decision making, and stability upon the tendency to innovate are not necessarily contradictory. The studies that led to these findings measured various kinds of innovation, used different schemes for categorizing institutions, and applied a variety of measures to determine the amount of innovation. It is clear, however, that the effect of these variables upon the rate of innovation in institutions has not yet been established.

Organizational Character

Rather than examining the relationship between one factor, such as size, and the innovativeness of an organization, many writers have described a variety of characteristics that mark an innovative institution. Burns and Stalker contrast the organic form of organization with the mechanistic one. They see the organic form as more appropriate for use in an environment marked by changing conditions. They list eleven characteristics of the organic form (1962, pp. 121–22), summarized by Lindquist (1978, p. 18). Levine summarizes Hage and Aiken's list of seven organizational variables that are most likely to help or impede the innovation-producing capacity of the organization (1980, p. 171). These lists are based primarily upon findings for business organizations. Putting these lists together, an innovative organization is characterized by the following features:

- The structure is not highly formal, centralized, and stratified. Decision making is decentralized. Tasks can be adjusted and reassigned easily. There is not a great disparity in the rewards given to people at the top and the bottom of the organization.
- There is not a great emphasis on quantity of production and efficiency. Quality is emphasized.
- Expertise and knowledge needed to solve problems can be located and utilized anywhere in organization. Omniscience is not attributed to those at the top of the hierarchy.

- Communication is lateral rather than vertical; it consists of information and advice, not instruction.
- There is commitment to the organization as a whole. Employees are interested in the progress and expansion of the organization.
- Prestige is attached to affiliation and expertise exercised in the environment external to the institution.

Other authors have fashioned lists of characteristics of what are variously called innovative, healthy, or self-renewing organizations. These other authors have been more directly concerned with educational institutions. The summaries below draw from Havelock (1973, pp. 136–38), Lindquist (1978, p. 44), Ostergren (1979, pp. 61–64), Peterson (1982, p. 127), Palola and Padgett (1971, pp. 74–87), and Reddick (1979, p. 11).

Such organizations are internally cohesive. They engage in self-examination in order to obtain a clear sense of problems to be addressed. They reach a consensus on goals—not the vague goals that universities easily generate for public consumption, but operational, achievable goals that are constantly reassessed.

The structure of a self-renewing college or university allows all categories of teachers and students to influence decision making. There is open communication and leadership dedicated to managing the change process.

Innovative people within these organizations are encouraged and supported. Since innovation often comes from new people in the institution, turnover of personnel is seen not necessarily as a detriment but as a process that encourages change. Those who favor innovation are allowed to rise to positions of influence.

Work in such institutions is organized in a way to avoid the deadening effect of obsession with ordinary problems. The amount of routine business is not allowed to consume all the time available. There are fewer formal meetings with set agendas. Groups are formed to work on basic problems that transcend day-to-day concerns. These groups are not ongoing regular committees; they are temporary task forces with a heterogeneous, nonrepresentative membership.

Most important, however, is the emphasis that innovative institutions place on encouraging new ideas. There is a positive attitude toward change, a willingness to try new ventures even though some may fail. Contacts with external sources of innovativeness are promoted. Incentives are established to encourage plans for change. Resources are provided for all stages of the change process through implementation. There is an understanding that renewal activities must be continuous. An office or person is assigned responsibility for advocating and instituting change. When innovative practices are instituted, they are made visible. Finally, the whole organization has an orientation toward the future.

Planning Procedures

An organization with structural features and a character conducive to change ideally will develop a planning process to monitor and respond to

the need for change. Models for planning processes are common in the literature about implementing change. These models usually are not descriptions of what is happening in specific institutions; rather they are proposals that organizations are urged to institute.

A wealth of terms are used to describe an organized planning process: planning, long-range planning, strategic planning, planned change, planned organizational change, applied organizational change, and organizational development (Cope 1982; Dill and Friedman 1979; Hipps 1982a). The processes these terms describe are based upon a rational planning model of change or the problem-solving model. Some processes, of course, combine elements of both models. The rational planning approaches emphasize a series of steps to identify problems, set goals, implement goals, and evaluate results. Planning procedures based upon the problem-solving model, while not ignoring goal achievement, give more attention to the training of individuals and work groups for effective functioning (Bennis 1966; Schmuck and Runkel 1975).

The planning process at many institutions already includes long-range plans, but the comprehensiveness of these plans varies. A distinction can be drawn between substantive planning, which is comprehensive, and expedient planning, which concentrates on enrollments and budgets, usually in response to a crisis or external demands (Palola and Padgett 1971). Another distinction is that between long-range plans, which cover internal resource deployment for five or ten years, and strategic planning, which focuses on the probable impact upon the institution of trends in the external environment and how the institution can respond now to these trends (Cope 1982). A further distinction is sometimes drawn between strategic planning, which deals with the overall mission and goals of the institution, and tactical planning, which outlines the goals and objectives of departments and divisions within the institution aimed at fulfilling the strategic plan (Miller 1980). In general, the planning models emphasize both the development of long-range plans and the continual monitoring of results and revision of plans.

Certain premises underlie the position that institutions must plan for change in an organized way. The first of these is that the operation of colleges and universities is so complex that they cannot respond to the need for change without specified procedures for comprehensive planning. Research techniques for the collection and analysis of data can generate information useful for planning. Thus, institutional research and information system components are needed to generate and analyze data. In addition, an office for institutional planning with a planned change specialist is suggested. The planned change specialist will use information about the organization not only to assist in setting goals but also to work for organizational development that will help the institution meet these goals. This office should be part of the institution's regular administrative structure. The functions of this office should be supported by top administrators, who must participate in the planning process (Alexander 1982; Winstead 1982a).

Articles on planned change frequently list the major steps in the planning process. These steps answer the questions: What do you want to do; how are you going to do it; and how will you measure if you did it (Miller 1980, p. 25)? The major steps taken to answer these questions include:

1. Stating clearly the goals and objectives of the institution
2. Gathering and analyzing data about how these are currently being met
3. Describing the programs now in use to meet the goals and objectives
4. Discovering the problems and opportunities that face the institution
5. Outlining the resources currently available to the institution
6. Revising the goals and objectives
7. Determining the resources that will be needed to meet the new goals and objectives and how to obtain these resources
8. Devising specific plans to reach the new goals and objectives
9. Implementing these plans
10. Evaluating the success of these plans (Buchtel 1982, p. 70; Winstead 1982a, pp. 28–29).

Resources should not be defined as only fiscal and physical assets. People are the key resource of a service organization. Thus, obtaining the resources to meet goals means not only recruitment of personnel but also working with members of the organization so that they accept and work for the goals with enthusiasm.

Some models of planned change operate through groups so that a plan is formulated and approved by those who might implement it. These models concentrate on the goal-setting stage. In Jayaram's (1976) open systems planning model, for example, a planning group works through several phases of the model. First, the group members create a "present scenario" by reviewing the external impacts on the organization, the internal environment of the organization, and the interaction between the two. Next, a "realistic future scenario" is constructed—the group's analysis of what will happen to the organization if no planned change takes place. Third, the group generates an "idealistic future scenario," which is what the group would want if it were omnipotent. The three scenarios then are examined to discover areas of agreement, uncertainty, and disagreement among them. In areas of agreement, the group works toward steps that can be taken to achieve what is wanted. In areas of uncertainty plans can be made for ways to alleviate the uncertainty. Where there is sharp disagreement, there is no basis for successful planning.

Another group process model, proposed by Delbecq and Van de Ven (1976), features a series of meetings with various groups at different stages in the model. A problem exploration meeting is held with client and consumer groups and representatives of the organization. Next is a knowledge exploration meeting with external and internal experts; this group puts forth alternative solutions to the problems identified in the problem exploration meeting. The third phase is priority development, in which key

officers of the organization discuss the resources needed to carry out the solutions generated at the knowledge exploration level. At this point, the solutions proposed are still flexible. A proposal that lacks administrative support should not be formulated. In the fourth phase, planners within the organization and line administrators develop a final, specific program. The final phase is an evaluation meeting at which persoms involved in the first three phases are present. This meeting reviews both whether the proposed plan responds to the concerns identified earlier and also how the success in meeting these concerns of the plan will be measured.

Planned change theories draw upon rational planning and problem-solving models of change. Adherents of the political model, however, may argue that the conflict inherent within higher education limits the usefulness of planned change strategies. The necessary consensus on goals and objectives cannot be reached.

Key Individuals in the Change Process

The key individuals in the change process were discussed earlier according to their role in the major change models. The research about change also generally considers persons and groups who can best lead or facilitate a change effort.

The Change Agent

The term change agent originally referred to a person, sometimes called a consultant, who was brought in by management to encourage the adoption of a change and who then left the organization. The basic role was one of facilitating and helping. Later the idea arose that change agents might be persons already within the organization. Especially for external change agents, the definition of the role includes a professional understanding of the social science concepts that explain the process of organizational change. An internal change agent is less likely to be a professional, although he or she (or they) also must understand how change takes place (Bruenig 1980).

Analysis of the advantages versus the disadvantages of an outside versus an inside change agent goes beyond the issue of professional stature. An internal change agent already knows the organization's structure and values. He or she is familiar to members of the organization and therefore probably is less threatening. Because an internal change agent will remain in the organization, there is a personal incentive for doing well (Havelock 1973). If the insider is respected, he or she begins the task with established legitimacy within the organization, and legitimacy is a major influence upon effectiveness (Paul 1977). These advantages of a person internal to the organization lead some to argue that a skillful insider can provide sustained and sensitive leadership that an outsider cannot match (Peterson 1982). In reviewing the performance of types of change agents (individual versus groups and internal versus external), Jones concluded that an internal group has the best chance for success (1969, p. 40).

Yet an internal change agent also has disadvantages. One is a lack of objectivity about the organization: An insider brings a predetermined perspective to the task of analyzing problems. An insider may lack the respect from fellow employees needed to confer legitimacy. Even if respected, an insider may not have the power within the organization to get things done. The existing role of the insider within the institution may limit flexibility. Ambiguity may arise as the existing role blends with the new role of change agent (Havelock 1973; Wattanbarger and Scaggs 1979).

Many of the advantages and disadvantages of an external change agent are the reciprocals of those of an insider. The outsider starts with a clean slate. He or she has no preexisting concept of the organization, and persons within the organization do not have experience with the outsider that colors their perceptions. An outsider is more likely to be aware of new developments in the field of change management. The external change agent can bring independence, prestige, and risk-taking qualities into the institution that might be difficult for an insider to exercise (Havelock 1973; Sikes, Schlesinger, and Seashore 1974).

The outsider's disadvantages include the fact that he or she is a stranger. This can be threatening to others in the organization because a stranger is not predictable. A stranger also is less knowledgeable about the organization. A question can also arise about the level of commitment of an outsider, who will leave after giving advice and not bear the consequences of that advice (Havelock 1973).

If the head of the organization brings in an outside change agent, the change agent may have no legitimacy or power base except that granted by the chief executive. In this case, the change agent has little chance of influencing the chief executive to go in directions the chief executive does not want to go (Firestone 1977).

Individuals and Groups in the Change Process

Certain people within the organization hold key positions to facilitate or hinder change. In the area of change in academic programs, the relative power of faculty and administrators has been investigated. Both faculty and administrators perceive themselves as the primary instigators of reform (Hefferlin 1969). Lindquist sees the locus of power in the senior faculty and high administrators, but this power is checked by departmental and professional autonomy (1978).

The support of top administrators, such as the president and vice president for academic affairs, is important. Although the support of these high officials is not sufficient to ensure change (Paul 1977), it was a key factor in many case histories (Baldridge 1971; Hook 1980; Ladd 1970; Winstead 1982b).

Involving leaders, either administrative or faculty, is not a simple task. People higher in the organizational hierarchy tend to perceive change as a greater risk than do those below them (Paul 1977, p. 60). The people most alert to ideas from the outside often are marginal people to the organization. Yet such involvement needs to be nurtured. Bruenig found that although successful innovators need interpersonal skills, more important than these skills was prestige or a leadership position within the institution (1980, p. 129).

Chairpersons can play a leadership role, usually as supporters and facilitators of change rather than as initiators (Paul 1977). Gatekeepers also are important facilitators; they can get the suggestion on the agenda of the decision-making authorities (Lindquist 1978).

The innovator seeking the support of leaders often is a group rather than an individual. As mentioned previously, Jones found internal groups to be the most effective change agents (1969, p. 40). Sometimes the group is one appointed to study a problem and report its findings. Sometimes the group is self-appointed. A self-appointed group has freedom to select its members and set its agenda; it must, however, establish legitimacy. A group established by a department or other unit has legitimacy within the unit. The mandate of such a group is limited to change within the unit. When established by the central administration, the group has a link with the center of power; it must avoid begin seen as a tool of the estab-

lishment while forging links with the rest of the institution (Sikes, Schlesinger, and Seashore 1974).

When a group is appointed, should its members be representative of groups on campus? Or should the ability to work well together be a prime criterion for appointment? In reviewing 11 cases, Ladd found that, with one or two exceptions, the ability to work together was not a requirement for appointments, but these cases generally are not stories of success (1970, p. 201). The representative nature of a group is seen as only one of a number of desirable characteristics for members, such as compatibility, variety of skills, and respectability (Havelock 1973, p. 45). Teams built around common interests have been found to be more successful than those based merely on representativeness (Sikes, Schlesinger, and Seashore 1974, p. 102).

A group fostering change has concerns that an individual innovator does not face: maintaining membership and effective group processes. A group can emphasize its internal relationship to the extent that task achievement is hindered, but a satisfying group interaction is an important factor in keeping people in the group (Sikes, Schlesinger, and Seashore 1974).

Group process problems that can inhibit effectiveness include inadequate interpersonal communication, fragile links between members, low participation, insufficient rewards, and insufficient feedback skills (Sikes, Schlesinger, and Seashore 1974). To avoid these problems the group should take several steps. First, it needs some general norms, which include planning to recruit and welcome new members, setting realistic expectations, having fun together, and celebrating successes (Sikes, Schlesinger, and Seashore 1974). To improve communications, members should be trained to observe and describe one another's behavior and feelings. Chickering et al. have described a team dynamics exercise in which observers report the behaviors of team members under the categories of providing structure, clarifying and summarizing information, introducing information, giving opinions, encouraging participation, and discouraging participation (1977, p. 148). Other tactics are available to improve group functioning. To strengthen links among members, the group can hold special meetings to report subgroup progress, have occasional long meetings, and sponsor off-campus workshops. Clarifying goals, using the talents of all members, and confronting disagreements in a nonpersonal fashion all can increase participation. The group should also set clear agendas and procedures, follow proper problem-solving sequences, and work to improve leadership skills (Sikes, Schlesinger, and Seashore 1974, pp. 131–37).

According to Lindquist (1977, p.4), the effective group has members who:

- Understand their role in the group
- Understand the group's role within the institution
- Communicate effectively with each other about issues of group efficiency

- Support each other
- Understand the behavior and dynamics of a group
- Use conflict in a positive way
- Collaborate rather than compete with each other
- Work well with other groups on campus
- Have a sense of interdependence.

Practical Advice About Change

Virtually no suggestion about facilitating a change effort has not been violated in some successful change program. Furthermore, the advice about instituting change is sometimes inconsistent, because opposite approaches may work in different situations. The advice in this chapter is a distillation of the most frequent suggestions in the research, but the wisdom of these suggestions cannot be validated either generally or for a specific situation. Thus, this advice provides a variety of approaches from which a person or group interested in change can make prudent selections.

Prerequisites for Change

Before embarking on a planned change effort, certain preliminary steps should be taken. In all stages of the change process, a sense of timing is important (Hook 1980; Smith 1977); sometimes groundwork must be laid before mounting a program of change. The most crucial dimension in change is the organization's receptivity to it (Bruenig 1980; Jones 1969). Factors that contribute to readiness for change were discussed earlier. In addition to assessing these factors, persons interested in change should foster a climate of readiness for change by keeping members of the campus community informed about change proposals in higher education (Lindquist 1978). Sometimes it is necessary to raise dissatisfaction with the status quo, but dissatisfaction becomes counterproductive if emotions rise to an unmanageable level (Glover 1980; Smith 1977).

First Steps in the Change Process

If the rerequisites are satisfied, the first steps can be taken. Some of the writings about change are from the perspective of an outside change agent; other parts of the literature look at change from the view of someone leading the effort from within the organization. The former writings deal with the process of establishing a relationship between the change agent and the institution (the client) and the roles that the change agent might play. These roles include *problem definer* and *solution giver* (expert who may not be strongly involved in the actual change effort); *catalyst* to overcome inertia and energize problem-solving capabilities of institution; *data collector-feedback agent* (again possibly with little involvement in the actual change process); *resource linker* to help client find out about financial resources, skills, and people it needs; *mediator* in conflict situations; and *process helper* to work with the client in all steps of the change effort—the diagnosis, definition, and solution of problems (Bruenig 1980; Sikes, Schlesinger, and Seashore 1974; Winstead 1982).

Once the issue of the relation of the external change agent to the client is resolved, the suggestions about the change process are similar regardless of who is leading the change effort. The first step is called either a needs assessment or a diagnosis and clarification of the problems of the institution (Lippitt, Watson, and Westley 1958). If the change process is one of institutional renewal, there might have to be initial agreement among the institution's constitutiences on the mission, goals, and priorities of the institution (Glover 1980). Diagnosis may require administering question-

naires and interviews to determine the views of faculty, administrators, and students. (Questionnaires can be developed locally or published forms can be used, such as the *College and University Environment Scales* or *Student Reactions to College*, distributed by the Educational Testing Service, or *The College Student Experience*, published by the Laboratory for Research on Higher Education at UCLA.) Another step in diagnosis can be researching the history of key issues on campus; this history may shape the response of constitutencies to change initiatives (Baldridge 1980).

Once problems are clarified, there should be an initial understanding of how change comes about in organizations. Knowledge of change processes should be secured (Hook 1980). Of course such knowledge cannot ever be complete. An innovator could become consumed with polishing the change plan, and so it is important to start arguing for approval of the plan at some point (Adelson 1974). One major issue that must be addressed early is the scope of change. In higher education, the individual faculty member is sometimes seen as the primary unit for adopting change (Axelrod 1973; Paul 1977; *The Drift of Change*, 1975). Even when institutional change is a likely prospect, gradual, incremental change is the normal method (Bennis 1972; Gaff 1978). Too intense and broad a change agenda can exhaust the participants (Alexander 1982). Yet if an organization is receptive to change, large-scale changes can be instituted (Jones 1969). Some argue that piecemeal change is not effective; total institutional renewal is required to make change really count (Reddick 1977).

Fashioning a Change Proposal

Three interrelated elements of a plan for change determine its prospects for adoption: the change proposed, the format and strength of the arguments in the plan document, and the strategies used to obtain approval. The nature of an innovation influences the strategies used to persuade people to accept it. On the other hand, the likelihood that certain strategies will be more successful may lead to restating the proposal in language that facilitates the use of such strategies.

The substance of the proposal. The substance of the proposed change should flow from the diagnosis and clarification of the problems. Alternative solutions should be reviewed and selection made from among these. If there is a change agent, this person (or group) can determine the appropriate role to play to facilitate accomplishment of the change goal.

At this point, models from creditable sources should be available to consider for local adaptation (Lindquist 1978). It is important to take the local environment into account—strengths, weaknesses, and history—in shaping the proposal. Changes must be effective within the local context; they must also be economically and politically feasible within that context (Baldridge 1975a).

Despite the need to be aware of unique local conditions, the literature provides certain generalizations about how to improve the chances for the proposal's success by properly formulating the substance of the plan.

A proposal designed by seasoned, knowledgeable people is more likely to respond correctly to the demands of the situation (Hook 1980). A planning team made up of people with extreme ideas is unlikely to produce a viable proposal (Bennis 1972; Hook 1980). If possible, the shaping of the proposal should involve those who will implement or use it (Adelson 1974). Involvement of eventual users is an example of the general principle of fostering a sense of ownership of the change among the organization's members. The warning to ensure ownership is one of the most frequently repeated caveats in the writings about change. The proposal should respond to members' needs, involve members in its designing, and be implemented with members' participation (Bruenig 1980; Coch and French 1948; Lindquist 1978; Ostergren 1979). Such participation improves not only the chances for acceptance of proposals but also may improve their quality. In business, most innovations originate at higher organizational levels. Because they are screened more carefully before being put into effect, successful innovations more often start at lower levels (Sikes, Schlesinger, and Seashore 1974).

Wide participation is urged even though the final product probably will be modified because of the breadth of the participation (Licklider 1981). Proposals generally become less venturesome as they progress from the idea stage through adoption (Ladd 1970).

Two factors that will increase resistance are keeping the outline of a proposal secret until the plan is unveiled and seeking the advice of people in a perfunctory way without the intention of listening to it (Bennis et al. 1976; Firestone 1977). When a plan is kept secret until it is presented to the decision-making body, two undesirable effects occur. First, the decision-making body, not being aware of the arguments and deliberations that went into the proposal, often will recapitulate the formulation process. Second, since the group that drew it up is presenting a complete plan, they may be inflexible about altering parts of it.

Certain features mark successful proposals. A common list of these includes relative advantage, compatibility, complexity, trialability, divisibility, and observability (communicability) (Evans 1967, p. 153; Levine 1980, p. 185). This list is derived primarily from studies of the diffusion of innovation, but it has been adopted by writers with various perspectives on change. One study of the diffusion of educational innovations at the secondary level found that relative advantage, compatibility, complexity, divisibility, and communicability only partially accounted for the rates of diffusion (Carlson 1965, p. 73).

Relative advantage refers to the superiority of a new idea to the idea it supersedes. A similar term used is profitability, "the degree to which an innovation satisfies the organizational, group, or personal needs" of an institution and those within it (Levine 1980, p. 158). Proposals with the greatest relative advantage integrate organizational and individual needs (Dykes 1978; Glover 1980). Professors have individual needs for survival (keeping their job), status (promotion, tenure, etc.), and achievement of academic goals (teaching improvement or scholarship). Institu-

tions have similar survival, status, and goal achievement needs. The strongest motivation to change comes from the desire to ensure personal survival needs. In general, the greater the number of both personal and organizational needs that an innovation addresses, the more likely is its adoption (Lindquist 1974, pp. 334–35).

Compatibility has two aspects. First, there is compatibility with the values, history, and traditions of the institution. Bennis, for example, reviews the kinds of power that a change agent can apply to get people to accept change. These include "coercive power" (reward and punishment), "referent or identification power" (the influence that a role model has), "expert power," "legitimate or traditional power" (power that stems from the norms, practices, or traditions of the institution), and "value power." He views value power as the most useful in a change process—"the ability to influence through representing and transmitting values which are admired and desired" by the institution (1965, pp. 168–69). Value power clearly works best when the substance of the change is compatible with the institution's values.

In studying the founding of faculty development programs at five institutions, Bruenig found that a compatible idea was one that appealed to the conservative-moderate majority of the faculty (1980, pp. 158–59). In attempting to completely redesign the academic structure at the State University of New York at Buffalo, Bennis discovered that one of his errors was allowing those opposed to change to appropriate the basic issue of academic standards (1972, p. 118); they were then able to pose changes as being incompatible with the goal of academic excellence.

The second aspect of compatibility is the fit between the change and the structure of the organization (Adelson 1974; Hook 1980). Compatibility will be served if the new idea can be instituted without establishing new organizational units. Using regular channels for the review and approval of the proposal can demonstrate such compatibility. Regular channels often are slow and resistant to change, but if the change is to endure, the use of ordinary approval procedures is best (Bruenig 1980).

Writers on change often speak of complexity as a fault. Rogers and Shoemaker found complexity of an innovation to be unrelated to the rate of adoption (Levine 1980, p. 185). It is better to call this factor simplicity—the degree to which the innovation is easy to use and understand. The advice is to have a clear, simple idea and concentrate efforts on obtaining its adoption (Baldridge 1980; Hook 1980).

However, some of the interactions between complexity and compatibility present problems. It may be easier to demonstrate the compatibility of a simple idea. Thus, such an idea can be adopted more easily, but complex, somewhat incompatible innovations may better respond to the multiple problems present; sometimes there may be no simple solution (Paul 1977). For example, many change plans involve changing people and altering organizational structure. Pomrenke recommends that the change in people should come first, but regardless of the order of the change sought, it will be complex (1982).

Furthermore, a simple idea may not necessarily be demonstrably compatible. Clark argues that intellectually sophisticated concepts are more likely to be adopted in higher education because they are seen as conforming to the university's value of excellence (1968). Finally, a plan may seem simple and compatible because its ramifications are not considered. It is difficult to institute a change in one area of an an institution without having it affect others. A change in the grading system, for example, can affect program content and student-teacher relationships (Axelrod 1973).

Trialability and divisibility are sometimes treated as a single characteristic (Levine 1980), but they are not identical. Trialability refers to whether the idea can be tried out, either partly or completely, for a period prior to a decision on adoption. Divisibility refers to whether the change must be adopted in toto. A plan that is divisible allows more room for compromise in the struggle over acceptance. Divisibility is related to complexity and trialability. It is more likely that a complex innovation can be broken down into components that can be instituted separately. A plan that is divisible allows for the adoption of one or more parts of it on a trial basis. Trialability can help in the adoption process, but the change adopted on a temporary basis is separated from the regular procedures of the institution that have permanent status (Ladd 1970).

Observability and communicability describe the extent to which the results of an innovation are visible and explainable to others.

The emphasis on simplicity and clarity of a plan for change requires qualification. The political realities of a situation may dictate that there is no clear plan that can command the support necessary for acceptance. In this case, ideas may initially be kept vague in order to garner maximum support (Levine 1980). At a later point, however, these vague ideas will need a form that can guide implementation. Implementation problems are especially likely when the plan is not specific enough to guide the implementation stage.

Format and strength of arguments. The typical document urging change in an institution of higher education is a report of an established committee or ad hoc group that analyzes the problem and suggests solutions. Such reports are necessarily rational in their approach; they comply with the academic value of cognitive rationality. The written rationale for a change provides the reasons for its relative advantage, compatibility, profitability, and so on. Although the arguments in support of the solutions proposed must be reasonable, they can appeal to a broad range of incentives to accept the change.

If the proposal is to change the curriculum or another aspect of the teaching-learning role of the college, the document should emphasize the importance of the curriculum and how it is presented: This is the central way that a higher education institution accomplishes its ends (Bruenig 1980; Wattanbarger and Scaggs 1979). In a total institutional renewal, the central emphasis should be on student learning (Reddick 1979).

Reasonable arguments can address personal interests as well as or-

ganizational needs. The proposal should, if possible, set out how it will reduce the burdens of faculty members (Adelson 1974). It should address the needs of faculty for personal security and professional accomplishment. Rewards should be clearly stated. If, for example, a proposal recommends general education courses that span disciplines, the proposal should state how the administration will positively view teaching such courses when evaluating salary and promotion. If this cannot be done, there could be cash bonuses for teaching the new courses (Levine and Weingart 1973).

The change should be presented in positive but realistic terms, and the experimental nature of change should be acknowledged. In fact, the stated aspirations for the amount and pace of change should be slightly pessimistic (Hook 1980). The literature supports such pessimism about the pace of change. The changes studied by Sikes, Schlesinger, and Seashore normally took three years to produce significant results (1974, p. 77). At five universities, an average period of 50.6 months transpired from the idea stage to the adoption stage (Bruenig 1980, p. 130). For a project of institutional renewal, Austin College adopted a two-year planning period and a four-year implementation period (Reddick 1979, pp. 33–34).

The change plan should have a low profile that deemphasizes the variance of the change from current practices (Gaff 1978). Even with the low profile and slightly pessimistic expectations, people's interest must still be engaged. The new ideas must excite (Lindquist 1978). Thus, there is a balancing act between promising enough to raise interest but not so much as to raise unrealistic hopes.

The change will be perceived as more legitimate if external sources demonstrate support for it. External evaluators of the change can also make it appear more legitimate (Winstead 1982b). Any reasonable evaluation plan, even with internal evaluators, increases legitimacy and allows for adjustments as the change progresses (Hook 1980). An idea is more acceptable if it is based upon a model from a respected institution that is worthy of emulation.

Apprehension about the ability of persons on campus to use the new idea successfully can be alleviated if the document includes provisions to retrain staff (Wattanbarger and Scaggs 1979). Provision for retraining is an example of the resource needs that the plan should address. The plan should anticipate that resources not initially foreseen might be needed. The temptation is to ask for a large cushion of resources. The problem with this is that the greater the request for resources, the more resistance there will be to the plan (Hefferlin 1969). Thus, a trade-off must often be made between the optimum level of resources desired and the level that keeps the cost of the change plan attractive (Maguire 1977).

Strategies to Obtain Approval

A change plan needs advocates who should formulate the strategies for winning approval. These strategies must consider the forces favorable and unfavorable to approval, the skills and characteristics needed among those

in the advocate group, the persons whose support is needed, and methods of communication.

Assessing prospects for approval. Force field analysis is a popular method of determining the prospects for change and the factors that the change strategy should address. First, the goals of the change plan are set out. For each goal, the forces within the institution favoring and hindering accomplishment are listed. These forces then are analyzed as to their strength, resiliency (can the direction be changed?), clarity (how fixed is the direction of this force?), and significance for the attainment of each goal. In planning a strategy, the significant positive forces should form bases of support; significant negative forces that are resilient should be the focus of an attempt to reduce them; and significant negative forces that are not resilient should be avoided and isolated (Chickering et al. 1977).

Because a college has many constituencies, it is difficult to frame proposals toward which there are only positive forces. The primary strategy, however, should be to reduce the forces resistant to change (Elton 1981). An attempt to increase the driving power of forces favorable to change is likely to raise more resistance to the change (Glover 1980).

Martorana and Kuhns describe a more complex type of force field analysis (1975). They point out that the forces for and against change interact with each other, and they define three types of these interactive forces:

- Personal forces: "decision makers, people influential in the institution and its environment . . . implementors . . . and consumers" (p. 177).
- Extrapersonal forces: "tangible influences (such as facilities, land and equipment) and intangible ones (such as policies, traditions, trends, and laws ranging from affirmative-action regulations to collective-bargaining legislation)" (pp. 177–78). Goal hiatus forces: arising from "the discrepancy between the aspiration toward a particular institutional goal and achievement of this goal" (p. 178).

A matrix of forces is developed that estimates the direction and strength of the factors that make up each of these forces at each of the five developmental stages of an innovation: exploration, formulation, trial, refinement, and institutionalization. By summing these estimates for all factors in the matrix, a total score for all the factors operating at each of the five stages is established. These scores can give change implementors an assessment of their prospects and a list of strong and weak factors to be addressed.

Advocate skills and characteristics. A change team should include information specialists to assemble data, committed zealots to inspire others, and political experts who can get things done (Sikes, Schlesinger, and Seashore 1974). Those leading a change effort should have an organiza-

tional perspective on change, be familiar with strategies, and have prior practical experience (Baldridge and Deal 1975a). Bruenig states the factors that he believes account for the success of faculty members assigned to instituting faculty development programs: high energy, commitment, persistence, tenured status, membership in or access to faculty leadership, reputation for professional competence, interpersonal skills and knowledge of campus politics. He also lists two attributes the innovator should display in order to improve his or her status with the faculty: altruism and the appearance of being apolitical (1980, p. 163). A person leading a change effort should be willing to give credit liberally to others and accept blame even if undeserved (Adelson 1974).

Persons whose support is needed. As discussed earlier, it is important to win the support of top administrators and to foster a broad sense of ownership in the change proposal. Wide participation is recommended not only in the formulation of a plan but also in the campaign to achieve its adoption; the more people involved, the better the chance for acceptance (Eddy 1977). Support should be sought from groups that already exist. If an ad hoc group proposes change, interest groups on campus should be approached to support the recommendations (Conrad 1978). If applicable, the support of external groups such as professional organizations also should be requested (Baldridge 1980). The force field analysis should indicate potential allies to court in the campaign for change.

Communications strategy. The change plan will contain arguments in its favor, but these written arguments should not be the sole method of communicating about the plan. Other possible methods of communication include oral presentations, films, demonstrations, person-to-person contacts, group discussions, conferences, workshops, and training events (Havelock 1973).

Discussions among small groups of faculty, administrators, students, and even alumni are effective ways of disseminating the change plan before it comes to a decision-making body (Glover 1980; Ladd 1970). Such discussions can avoid a time lag during which the proposal receives no consideration.

College faculty are more responsive to information contained in printed materials than are elementary and secondary school teachers, but as a plan moves from the information stage to the adoption and implementation stages, face-to-face communication is preferable (Paul 1977). The two-way flow of information in conversations is important because those seeking change need to receive feedback about their proposal to improve both the proposal itself and its chances for acceptance.

Implementation

Implementation is the stage in the process that should immediately follow approval (Palola and Padgett 1971). Implementation "starts with the formal adoption of the change in question and with the creation of the nec-

essary initial conditions (e.g., resources) for its launching" (Cerych 1979, p. 9). Implementation is more than adoption and creation of initial conditions; efforts to institutionalize the change may continue for many years.

At all levels of the educational system, incomplete implementation of innovations is more common than complete implementation (Paul 1977). Sometimes all of an innovator's energy goes into the process of obtaining acceptance; implementation is viewed as a technical problem to be resolved later (Chickering et al. 1977; Pressman and Wildavsky 1973). To guard against incomplete implementation, implementation issues should be considered when formulating the change plan—even if the steps proposed for implementation might raise additional resistance to the plan (Hook 1980). If specifying the implementation procedures will raise sufficient additional resistance to imperil the plan's adoption the advocates may decide to avoid spelling them out, but they should consider the problems this may cause later. Not only should the implementation steps be specified, but implementation also should be assigned.

Unless implementation plans are established and executed, several factors may block proper implementation. The preceding stages of change influence the implementation process. The battles of the policy formulation stage may be refought as implementation is considered, providing another chance for the losing side to try to reverse the decision (Cerych 1979). Even if there is willingness to implement, this may be frustrated if those who must use an innovation do not fully understand it, if the skills and knowledge to carry out the innovation are lacking, if resources to install the new procedure are unavailable, or if organizational arrangements are incompatible with the innovation. These four factors were found to block the implementation of an innovation at the elementary school level that required a major change in teacher role performance (Gross, Giacquinta, and Bernstein 1971, p. 196).

Even if a change is initially implemented, it may not last long. Four innovative programs in educational psychology were examined to find out which ones continued for 10 years and why. The two that continued were less radical than the others, had continuity of leadership, and had costs that could be accommodated through the regular departmental budget (Charles 1980, pp. 159, 162). Innovations at the course level often depend upon one or a few professors; if these people leave the institution, others generally do not sustain the innovative course.

Levine's book *Why Innovation Fails* (1980) is a study of the founding and partial demise of the subdivisions called colleges created at the State University of New York at Buffalo under Martin Meyerson in the late 1960s. From a review of the literature, Levine builds an institutionalization-termination model to explain why and how innovations are continued or terminated. The key factors in the model are profitability and compatibility. Profitability is divided into self-interest profitability, which motivates subunits and staff to adopt innovations, and general profitability, which motivates the organization to maintain an innovation. Profitability and compatibility are related: An incompatible innovation tends to be

unprofitable. Profitability is seen as more important to the institution. An unprofitable innovation is terminated sooner than an incompatible one (pp. 159–60).

Once adopted, an innovation is either institutionalized or terminated (Levine 1980). Through boundary expansion, an institution can either adopt the traits of the innovation or at least accept them. The former approach results in a more pervasive institutionalization than the latter. In boundary contraction the organizational boundaries constrict so as to exclude the differences of the innovation. The innovation can change so that it displays norms that fall within the new organizational boundaries. If the innovation does not change, termination occurs (pp. 14–15). Such termination was rare for the colleges Levine studied at Buffalo (1980, p. 161).

Levine's model is a theoretical explanation of the process rather than a compilation of practical advice. His model can serve, however, as a framework for persons considering how to plan for the implementation of change as they formulate a complete proposal for change.

Conclusions

There is no established, validated theory of how change occurs in higher education. The models that are not syntheses of other models tend to concentrate on one aspect of the change process, such as the political, or a particular type of change situation, such as the diffusion of a technical innovation. Much of the work on change in colleges and universities does not claim to be comprehensive; articles and books often report the history of change efforts at particular institutions. Discussions of change on campus also draw upon works that discuss change in other contexts: businesses, communities, national systems of higher education, elementary and secondary schools, and so on. Bruenig (1980) summarizes eight major texts on planned change published between 1958 and 1978. Many of the points made in the literature on change derive from these eight texts. Lindquist's *Strategies for Change* and Levine's *Why Innovation Fails* attempt to provide comprehensive frameworks that draw upon earlier writings. Given the variety of institutions of higher education, the search for a validated theory of change may be impossible.

Change practitioners therefore cannot call upon any one established theory. Even if there were such a theory, it is doubtful that it would be specific enough to detail the steps to be taken in each situation where change is attempted. At best, the theory would probably list the factors that have been proven crucial in a broad range of change activities. The change practitioner still would be faced with the same situation he or she now faces: selection from a number of tactics recommended by the literature. An established theory of change might eliminate some of the inconsistencies that arise from compiling items of practical advice about change, but it would not provide an unambiguous road map.

The writings about change do, however, provide some very broad guidelines on which there is strong agreement. First, in a college or university change cannot be ordered by top administrators. Even the political model of change, which stresses access to persons with power, suggests that influence should be exercised through ordinary channels, however cumbersome. High-level administrators can best facilitate change by establishing procedures to ensure that the institution explores the need to change and giving full consideration to proposals responding to that need.

Second, a prime way that an institution explores the need to change is through a program of institutional research. Much change probably fails because it grows out of an incorrect or incomplete analysis of the problem addressed. There are published instruments to sample the goals, activities, perceptions of the environment, and so on of persons in the campus community. Care must be taken, however, in deciding what information is needed, who can best supply it, and what instruments best tap this information. The process of collecting information may confirm prior opinions. If so, these opinions will have a stronger basis.

Third, it is very difficult to institute change in an institution where there is little perceived need for change. Problems discovered through an analysis of the current state of affairs must be communicated to persons at various levels of the organization. Unless at least some people in au-

thority warm up to the change plan, chances for acceptance are slim. Despite the inconvenience of touching base with many people in the organization, a change plan conceived by a few people, no matter how wise, will not be likely to gain assent. Even though broad participation might weaken the brilliant points of the plan, it is just as likely to improve defects in the initial conception.

Fourth, the theories and advice about instituting change contain few surprises. If a test with true-false or multiple-choice questions were devised based on these theories and advice, most people who had been around a college campus for a while would score well on the test. A review of theories and advice about change nevertheless can remind persons of ideas they might be overlooking.

Finally, even if the advice about instituting change is followed, an effort to establish change still can fail. The institution may not be receptive to change, and efforts to instill receptivity may founder. The change recommended may be unwise, so that it either will not be accepted or, if accepted, will not be effective. Change advocates may misread some of the key factors necessary for success. If the recommended steps are followed, however, at least the effort will not fail because of a failure to recognize the important elements in the change process. Thus, while not sufficient to ensure success, knowledge of the theories and advice about change certainly is important and worthwhile.

Bibliography

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Adelson, Marvin. "On Changing Higher Education from Within." *American Behavioral Scientist* 18 (November/December 1974): 232–49.

Alexander, David R. "Case Study: The Wichita State University Experience." In *Effective Planned Change Strategies*, edited by G. Melvin Hipps. New Directions for Institutional Research, No. 33. San Francisco: Jossey-Bass, 1982.

Armstrong, Ellen C., and Dykes, Martha Draper. "University Support Systems Necessary to Implement Institutional Change." Paper presented at the 18th annual Association for Institutional Research Forum, 1978, in Houston, Tex. ED 161 400. MF-$1.11; PC-$3.49.

Axelrod, Joseph. *The University Teacher as Artist*. San Francisco: Jossey-Bass, 1973.

Baldridge, J. Victor. *Power and Conflict in the University*. New York: John Wiley & Sons, 1971.

_____. "Organizational Change: The Human Relations Perspective Versus the Political Systems Perspective." *Educational Researcher* 1 (February 1972): 4–10, 15.

_____. "Organizational Innovation: Individual, Structural, and Environmental Impacts." In *Managing Change in Educational Organizations*, edited by J. Victor Baldridge and Terrence E. Deal. Berkeley, McCutchan, 1975a.

_____. "Organizational Change and the Consultant's Role: Rules for Effective Action." In *Managing Change in Educational Organizations*, edited by J. Victor Baldridge and Terrence E. Deal. Berkeley: McCutchan, 1975b.

_____. "Managerial Innovations: Rules for Successful Implementation." *Journal of Higher Education* 51 (March/April 1980): 117–34.

Baldridge, J. Victor, and Deal, Terrence E. "Overview of Change Processed in Educational Organizations." In *Managing Change in Educational Organizations*, edited by J. Victor Baldridge and Terrence E. Deal. Berkeley: McCutchan, 1975a.

_____. eds. *Managing Change in Educational Organizations*. Berkeley: McCutchan, 1975b.

Bennis, Warren G. *Changing Organizations*. New York: McGraw-Hill, 1965.

_____. "Who Sank the Yellow Submarine?" *Psychology Today* 6 (November 1972): 112–20.

Bennis, Warren G.; Benne, Kenneth D.; Chin, Robert; and Corey, Kenneth E., eds. *The Planning of Change*. 3d ed. New York: Holt, Rinehart and Winston, 1976.

Blau, Peter M. *The Organization of Academic Work*. New York: John Wiley & Sons, 1973.

Brubaker, Dale L. "Two Views of Educational Change Strategies." *Journal of Instructional Psychology* 6 (Spring 1979): 5–9.

Bruenig, Robert Henry II. "Proposals for Change: A Study of Proposals to Establish Development Programs at Five Universities and One College of the California State University and Colleges." Ph.D. dissertation, Union Graduate School-West, 1980.

Buchtel, Foster S. "Case Study: The University of Akron Experience." In *Effective*

Planned Change Strategies, edited by G. Melvin Hipps, New Directions for Institutional Research, No. 33. San Francisco: Jossey-Bass, 1982.

Burns, Tom, and Stalker, G. M. *The Management of Innovation*. Chicago: Quadrangle Books, 1962.

Butts, David P.; Hall, Gene E.; and Koran, John J., Jr. *College Teachers: A Resource for Implementing Change*. Austin: Science Education Center and Research and Development Center for Teacher Education, University of Texas at Austin, 1970. ED 052 160. MF-$1.11; PC-$6.79.

Carlson, Richard O. *Adoption of Educational Innovations*. Eugene: Center for the Advanced Study of Educational Administration, University of Oregon, 1965.

Cerych, Ladislav. "Higher Education Reform: The Process of Implementation (Towards a Conceptual Framework)." *Education Policy Bulletin* 7 (Spring 1979): 5–21.

Charles, D. C. "Duration of Innovation in Educational Psychology." *Educational Psychologist* 15 (Fall 1980): 159–63.

Chickering, Arthur W.; Halliburton, David; Bergquist, William H.; and Lindquist, Jack. *Developing the College Curriculum*. Washington, D.C.: Council for the Advancement of Small Colleges, 1977. ED 152 125. MF-$1.11; PC-not available EDRS.

Chin, Robert, and Benne, Kenneth D. "General Strategies for Effecting Changes in Human Systems." In *Creating Social Change*, edited by Gerald Zaltman, Philip Kotler, and Ira Kaufman. New York: Holt, Rinehart and Winston, 1972.

Christenson, Donald D. "Changes in Higher Education: Forces and Impacts." In *Effective Planned Change Strategies*, edited by G. Melvin Hipps. New Directions for Institutional Research, No. 33. San Francisco: Jossey-Bass, 1982.

Clark, Burton R. "The Organizational Saga in Higher Education." In *Managing Change in Educational Organizations*, edited by J. Victor Baldridge and Terrence E. Deal. Berkeley: McCutchan, 1975.

Clark, Terry N. "Institutionalization of Innovation in Higher Education." *Administrative Science Quarterly* 13 (June 1968): 1–25.

Coch, Lester, and French, John R. P., Jr. "Overcoming Resistance to Change." *Human Relations* 1 (1948): 512–32.

Conklin, G. H. "Frustration of Academic Innovation: Can New Teaching Techniques Survive in the Academic Marketplace?" *Teaching Sociology* 5 (January 1978): 125–40.

Conrad, Clifton F. "A Grounded Theory of Academic Change." *Sociology of Education* 51 (April 1978): 101–12.

Cope, Robert E. *Strategic Planning, Management, and Decision Making*. AAHE-ERIC/Higher Education Research Report No. 9, 1981. Washington, D.C.: American Association for Higher Education, 1981. HE 015 265. MG-$1.11; PC-$6.79.

Deal, Terrence E., and Baldridge, J. Victor. "An Organizational View of Educational Innovation." Stanford: Stanford Center for Research and Development in Teaching, 1974. ED 097 757. MF-$1.11; PC-$5.14.

Delbecq, André L., and Van de Ven, Andrew H. "A Group Process Model for Problem Identification and Program Planning." In *The Planning of Change*, 3d ed., edited by Warren G. Bennis, Robert Chin, and Kenneth E. Corey. New York: Holt, Rinehart and Winston, 1976.

Dill, David D., and Friedman, Charles P. "An Analysis of Frameworks for Research on Innovation and Change in Higher Education." *Review of Educational Research* 49 (Summer 1979): 411–35.

The Drift of Change. An Interim Report of the Group for Research and Innovation in Higher Education. London: The Nuffield Foundation, 1975.

Dykes, Marie Draper. "University Support Systems Necessary to Implement Institutional Change: Faculty Support Systems." Paper presented at the 18th annual Association for Institutional Research Forum, 1978, in Houston, Tex. ED 161 401. MF-$1.11; PC-$3.49.

Eddy, Catherine Logan. "The Process of Change." *Education Canada* 17 (Summer 1977): 41–43.

Eichholz, Gerhard, and Rogers, Everett M. "Resistance to the Adoption of Audiovisual Aids by Elementary School Teachers: Contrast and Similarities to Agricultural Innovation." In *Creating Social Change*, edited by Gerald Zaltman, Philip Kotler, and Ira Kaufman. New York: Holt, Rinehart and Winston, 1972.

Elton, Lewis. "Can Universities Change?" *Studies in Higher Education* 6, No. 1 (1981): 23–33.

Evans, Richard I. *Resistance to Innovation in Higher Education*. San Francisco: Jossey-Bass, 1967.

Farrar, Eleanor; DeSanctis, John E; and Cohen, David K. "Views from Below Implementation Research in Education." *Teachers College Record* 82 (Fall 1980): 77–100.

Fincher, Cameron. "The Failures of Innovation." *Research in Higher Education* 12 (1980): 373–76.

Firestone, William A. "Participation and Influence in the Planning of Educational Change." *The Journal of Applied Behavioral Science* 13 (April 1977): 167–83.

Gaff, Jerry G. "Overcoming Faculty Resistance." In *Institutional Renewal Through the Improvement of Teaching*, edited by Jerry G. Gaff. New Directions for Higher Education, No. 24. San Francisco: Jossey-Bass, 1978.

Glover, Robert H. "A Contingency Approach to Planned Change in Colleges and Universities." Ph.D. dissertation, Duke University, 1980.

Gross, Neal; Giacquinta, Joseph B.; and Bernstein, Marilyn. *Implementing Organizational Innovations*. New York: Basic Books, 1971.

Hall, Gene E. "Levels of Use and Extent of Implementation of New Programs in Teacher Education Institutions: What Do You Do?" Paper presented at the annual meeting of American Association of Colleges of Teacher Education, 1979a, in Chicago. ED 189 078. MF-$1.11; PC-$5.14.

_____. "The Concerns-Based Approach to Facilitating Change." *Educational Horizons* 57 (Summer 1979b): 202–8.

Hammons, James O., and Jaggard, Sharon. "Faculty Fellowships: Catalysts for Instructional Change." *Community College Frontiers* 4 (Summer 1976): 20–23.

Hansen, Valerie R. "Planning Through a Decentralized Process Case Study: University of Wisconsin-Stout." *Planning for Higher Education* 7 (June 1979): 15–18.

Hartman, James B. "Change and Conflict in the University." *The Journal of Educational Thought* 11 (April 1977): 3–15.

Havelock, Ronald G. *The Change Agent's Guide to Innovation in Education*. Englewood Cliffs, N.J.: Educational Technology Publications, 1973.

Havelock, Ronald G., and Mary C. *Training for Change Agents: A Guide to the Design of Training Programs in Education and Other Fields*. Ann Arbor: Institute for Social Research, University of Michigan, 1973. ED 056 259. MF-$1.11; PC-$17.43.

Haworth, Shirley L. "A Framework for Analyzing Change in Educational Settings." *Journal of Instructional Psychology* 6 (Winter 1979) 11–18.

Hefferlin, JB Lon. *Dynamics of Academic Reform*. San Francisco: Jossey-Bass, 1969.

Heist, Paul, and Taylor, Maxwell F. "The Block Plan: A Preliminary Report on a Ten-Year Evaluation of the Colorado College Block Plan Format for Intensive Study." Mimeographed. Colorado Springs: Colorado College, 1979.

Hennigar, James W., and Taylor, Raymond G. "A Study of the Correlation Between General Administrative Style and Openness to Change." *Journal of Instructional Psychology* 7 (Winter 1980): 6–12.

Hewton, Eric. "A Strategy for Promoting Curriculum Development in Universities." *Studies in Higher Education* 4, No. 1 (1979): 67–75.

Hipps, G. Melvin, ed. *Effective Planned Change Strategies*. New Directions for Institutional Research, No. 33. San Francisco: Jossey-Bass, 1982a.

_____. "Faculty and Administrative Development." In *Effective Planned Change Strategies*, edited by G. Melvin Hipps. New Directions for Institutional Research, No. 33. San Francisco: Jossey-Bass, 1982b.

_____. "Summary and Conclusions." In *Effective Planned Change Strategies*, edited by G. Melvin Hipps, New Directions for Institutional Research, No 33. San Francisco: Jossey-Bass, 1982c.

Hook, John Randolph. "Innovations in Management Education at the U.S. Army War College: The Application of a Theory of Planned Organizational Change." D.P.A. dissertation, University of Southern California, 1980.

Hruby, Norbert J. *A Survival Kit for Invisible Colleges*. 2d ed. Boulder: National Center for Higher Education Management Systems, 1980. ED 196 317. MF-$1.11; PC-$8.81

Ingram, E. J. "The Politics of Policy Implementation." *Education Canada* 18 (Fall 1978): 19–23, 30.

Jayaram, G. K. "Open System Planning." In *The Planning of Change*, 3d ed., edited by Warren G. Bennis, Robert Chin, and Kenneth E. Corey, pp. 275–83. New York: Holt, Rinehart and Winston, 1976.

Jones, Garth N. *Planned Organizational Change*. New York: Frederick A. Praeger, 1969.

Katz, Daniel, and Kahn, Robert. "Organizational Change." In *Managing Change in Educational Organizations*, edited by J. Victor Baldridge and Terrence E. Deal. Berkeley: McCutchan, 1975.

Klein, Donald. "Some Notes on the Dynamics of Resistance to Change." In *The Planning of Change*, 3d ed., edited by Warren G. Bennis, Robert Chin, and Kenneth E. Corey. New York: Holt, Rinehart and Winston, 1976.

Kozma, Robert B. "Faculty Development and the Adoption and Diffusion of Classroom Innovations." *Journal of Higher Education* 49 (September/October 1978): 438–49.

_____. "Factors Involved in the Adoption and Dissemination of Instructional Innovations." Paper presented at annual meeting of the American Educational Research Association, 1979, in San Francisco. ED 175 424. MF-$1.11; PC-$3.49.

Ladd, Dwight R. *Change in Educational Policy*. New York: McGraw-Hill, 1970.

Lawton, Stephen B., and Lawton, William H. "An Autocatalytic Model for the Diffusion of Educational Innovations." *Educational Administration Quarterly* 15 (Winter 1979): 19–46.

Levine, Arthur. *Why Innovation Fails*. Albany, New York: State University of New York Press, 1980.

Levine, Arthur, and Weingart, John. *Reform of Undergraduate Education*. San Francisco: Jossey-Bass, 1973.

Licklider, Roy E. "A Political Primer for Innovation." *Improving College and University Teaching* 29 (Winter 1981): 12–14.

Lindquist, Jack. "Political Linkage: The Academic-Innovation Process." *Journal of Higher Education* 45 (May 1974): 323–43.

_____. "Implementing Contract Learning Innovation Process in Higher Education." Paper presented at the National Conference on Higher Education of the

American Association for Higher Education, 1975 in Chicago. ED 111 308. MF-$1.11; PC-$3.49.

———. "Team Building for Innovation." Draft Chapter for Kellogg *Use of Innovations Handbook*, November 1977. Mimeographed.

———. *Strategies for Change*. Berkeley: Pacific Soundings Press, 1978.

Lippitt, Ronald. "The Use of Social Research to Improve Social Practice." In *Creating Social Change*, edited by Gerald Zaltman, Philip Kotler, and Ira Kaufman. New York: Holt, Rinehart and Winston, 1972.

Lippitt, Ronald; Watson, Jeanne; and Westley, Bruce. *The Dynamics of Planned Change*. New York: Harcourt, Brace & World, 1958.

Maguire, John David. "Can Change Be Institutionalized? How?" *Liberal Education* 63 (December 1977): 584–89.

Making the Best of It: The Final Report of the Group for Research and Innovation in Higher Education. London: The Nuffield Foundation, 1976.

Martorana, S. V., and Kuhns, Eileen. *Managing Academic Change*. San Francisco: Jossey-Bass, 1975.

Meyer, Jan H. F. "Media Innovation and Faculty Change." *Audiovisual Instruction* 23 (February 1978): 44–45.

Miller, John Edgar. "Planning in Small Colleges." *Planning for Higher Education* 9 (November 1980): 25–29.

Ohme, Herbert. "Ohme's Law of Institutional Change." *Phi Delta Kappan* 59 (December 1977): 263–65.

Ostergren, Bertil. *The Management of Change in Swedish Higher Education*. Paris: United Nations Educational, Scientific, and Cultural Organization, 1979. ED 183 036. MF-$1.11; PC not available EDRS.

Palola, Ernest G., and Padgett, William. *Planning for Self-Renewal*. Berkeley: Center for Research and Development in Higher Education, University of California at Berkeley, 1971. ED 050 704. MF-$1.11; PC-$12.11.

Parker, Charles A. "The Literature on Planned Organizational Change: A Review and Analysis." *Higher Education* 9 (July 1980): 429–42.

Paul, Douglas A. "Change Processes at the Elementary, Secondary, and Post-Secondary Levels of Education." In *Linking Processes in Educational Improvement: Concepts and Applications*, edited by Nicholas Nash and Jack Culbertson. Columbus, Ohio: University Council for Educational Administration, 1977.

Peterson, Marvin W. "An Outsider's View: Prelude, Interlude, or Postlude." In *Effective Planned Change Strategies*, edited by G. Melvin Hipps. New Directions for Institutional Research, No. 33. San Francisco: Jossey-Bass, 1982.

Plato, Kathleen C. "Student Development as Policy: Strategies for Implementation." *Journal of College Student Personnel* 18 (November 1977): 518–21.

Pomrenke, Velma. "Team Leadership Development." In *Effective Planned Change Strategies*, edited by G. Melvin Hipps. New Directions for Institutional Research. No. 33. San Francisco: Jossey-Bass, 1982.

Pressman, Jeffrey L., and Wildavsky, Aaron. *Implementation*. Berkeley: University of California Press, 1973.

Reddick, DeWitt C. *Wholeness and Renewal in Education*. Sherman, Tex.: Austin College, 1979. ED 187 158. MF-$1.11; PC-$10.46.

Riesman, David, and Stadtman, Verne A., eds. *Academic Transformation*. New York: McGraw-Hill, 1973.

Ross, R. Danforth. "The Institutionalization of Academic Innovations: Two Models." *Sociology of Education* 49 (April 1976): 146–55.

Rothman, Jack; Erlich, John L.; and Teresa, Joseph G. *Promoting Innovation and Change in Organizations and Communities: A Planning Manual*. New York: John

Wiley & Sons, 1976.

Schmuck, Richard A., and Runkel, Philip J. "Organizational Training." In *Managing Change in Educational Organizations*, edited by J. Victor Baldridge and Terrence E. Deal. Berkeley: McCutchan, 1975.

Sherwood, Frank P. "Action Research: Some Perspectives for Learning Organizations." *Administration & Society* 8 (August 1976): 175–92.

Sikes, Walter W.; Schlesinger, Lawrence E.; and Seashore, Charles N. *Renewing Higher Education from Within*. San Francisco: Jossey-Bass, 1974.

Smith, Harry E. "Renewing Liberal Arts Colleges: Identifying, Planning, Implementing, and Assessing Institutional Renewal." New Haven: Society for Values in Higher Education, 1977. ED 140 712. MF-$1.11; PC-$3.49.

Smith, Joyce, and Finch, Harold L. "Private Colleges: Strategies for Change." *Planning for Higher Education* 4 (February 1975): 7–8.

Stiles, Lindley J., and Robinson, Beecham. "Change in Education." In *Processes and Phenomena of Social Change*, edited by Gerald Zaltman. New York: John Wiley & Sons, 1973.

Thier, Herbert D. "From SCIS to PELE: Approaches to Effective Dissemination and Adaptation of Instructional Programs." *Science Education* 65 (January 1981): 105–13.

Van Meter, Eddy J. "Planned Change in Education." *Administrator's Notebook* 28, No. 7 (1979–80): 1–4.

Walker, Paul D. "Developing a Healthy Climate for Educational Change: An Administrative Approach." *Community College Review* 8 (Spring 1981): 22–26.

Watson, Goodwin. "Resistance to Change." In *Creating Social Change*, edited by Gerald Zaltman, Philip Kotler, and Ira Kaufman. New York: Holt, Rinehart and Winston, 1972.

Wattenbarger, James L., and Scaggs, Sandra. "Curriculum Revision and the Process of Change." In *Shaping the Curriculum*, edited by Arthur M. Cohen. New Directions for Community Colleges, No. 25. San Francisco: Jossey-Bass, 1979.

Winstead, Philip C. "Planned Change in Institutions of Higher Education." In *Effective Planned Change Strategies*, edited by G. Melvin Hipps. New Directions for Institutional Research, No. 33. San Francisco: Jossey-Bass, 1982b.

———. "Case Study: The Furman Experience." In *Effective Planned Change Strategies*, edited by G. Melvin Hipps. New Directions for Institutional Research, No. 33. San Francisco: Jossey-Bass, 1982b.

Woodbury, Robert L. "Organizational Change and the Improvement of University Teaching." *Studies in Higher Education* 4, No. 2 (1979): 255–59.

Zaltman, Gerald, ed. *Processes and Phenomena of Social Change*. New York: John Wiley & Sons, 1973.

Zaltman, Gerald, and Duncan, Robert. *Strategies for Planned Change*. New York: John Wiley & Sons, 1977.

Zaltman, Gerald; Kotler, Philip; and Kaufman, Ira, eds. *Creating Social Change*. New York: Holt, Rinehart and Winston, 1972.

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